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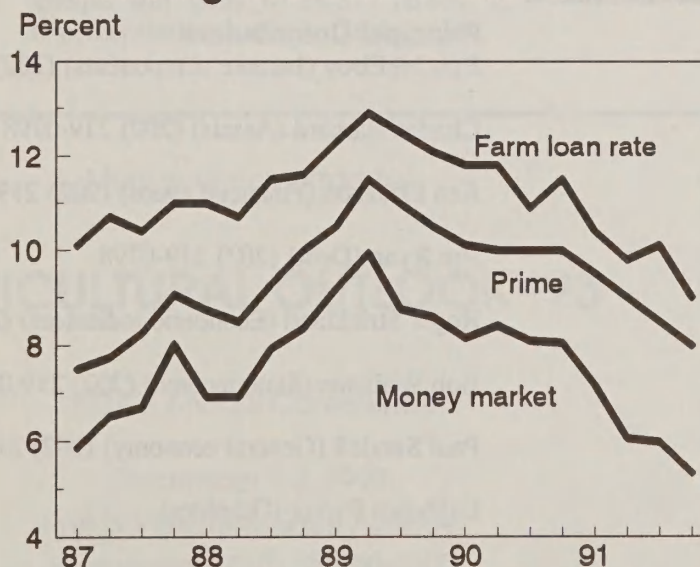
AFO-46
September 1992

Agricultural Income and Finance

Situation and Outlook Report

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Lending Rates on 3-Year Decline



Approved by the World Agricultural Outlook Board. Summary released September 14, 1992. The next summary of the *Agricultural Income and Finance Situation and Outlook* is scheduled for release on December 14, 1992. Summaries of Situation and Outlook reports may be accessed electronically through the USDA CID system.

The *Agricultural Income and Finance Situation and Outlook* is published four times a year. Subscriptions are available from ERS-NASS, 341 Victory Drive, Herndon, VA 22070. Or call, toll free, (U.S. and Canada only), 1-800-999-6779 (weekdays, 8:30-5:00 ET). All others, call 703-834-0125.

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Economics Editor	
Robert Dubman (202) 219-0809	
Senior Financial Analyst	
Bob McElroy (202) 219-0800	
Principal Contributors	
Bob McElroy (Income components) (202) 219-0800	
Charles Barnard (Assets) (202) 219-0798	
Ken Erickson (Financial ratios) (202) 219-0799	
Jim Ryan (Debt) (202) 219-0798	
Roger Strickland (Economic indicators) (202) 219-0808	
Bob Williams (State income) (202) 219-0808	
Paul Sundell (General economy) (202) 219-0782	
LaShawn Parker (Graphics)	

Summary

Farm Financial Prospects Improve

More complete information indicates 1991 net farm income totaled \$45 billion, almost \$3 billion above the May estimate. Net farm income for 1992 is forecast at \$42-\$47 billion, up from the \$37-\$45 billion forecast in May. Net cash income for 1992 is forecast at \$54-\$57 billion, compared with the \$58 billion currently estimated for 1991. Although 1992 crop receipts are expected to be lower than forecast in May, livestock and dairy receipts are forecast higher. Rounding out the situation is an increase in Government payments and lower production expenses.

Wheat cash receipts are forecast up substantially, with increased marketings and higher prices. These conditions could mean 1992 wheat receipts of \$6-\$8 billion, up more than 25 percent from 1991.

Increased corn acreage and favorable July weather will likely contribute to record corn yields, and reduce prices nearly 5 percent for calendar 1992. Corn cash receipts will probably decline 4 percent with significant increases in inventories. Corn receipts still will be

higher than for all but the past 2 years. Larger 1992 grain sorghum and oats crops are also forecast.

Favorable weather may also lead to the largest oilseed crop since 1985/86. Oilseed cash receipts are forecast at \$11-\$13 billion, down 2 percent from 1991. Soybean receipts are off 1 percent and peanut receipts are off 5 percent.

Citrus production and prices for 1992 are forecast near normal following a December 1990 California freeze. Fruit receipts are expected to increase 5 percent.

This year's high world and U.S. cotton supplies are depressing 1992 prices. Cotton cash receipts may be down 10-15 percent to \$4-\$6 billion, about the same as in 1989.

On the livestock side, hog receipts show the largest percentage decline from 1991. Hog prices, at or just above cash costs, have been down since the first of the year but production is up. Hog cash receipts will likely be \$9-\$11 billion, 10 percent below last year. Cattle prices

are also down, particularly for calves. This could lead to a 6-percent drop in cattle and calf receipts.

For 1992, higher milk prices will boost dairy receipts nearly 10 percent to near the 1990 record.

Total direct Government payments are forecast up 17 percent for 1992. Total deficiency payments are about the same as last year as lower food grain payments offset higher cotton payments. The overall increase has two major sources: Around \$1 billion in disaster payments—mostly for 1990 and 1991 crop losses—and an additional \$100 million in CRP payments.

Production expenses may increase only 2 percent from last year because input prices will rise just slightly for 1992. Expenses are forecast to decrease for feeder livestock (due to lower calf and hog prices) and interest (due primarily to lower rates). Other expense accounts generally are forecast to increase 2-5 percent.

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In the Wednesday session on **Prospects for Farm Sector Earnings, Finance, and Inputs**, USDA analysts will cover farm income and finance topics in line with this publication.

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Recovery in the Fruit and Wheat Sectors Raising '92 Crop Receipts

Last year saw citrus decimated by freeze in California and wheat reduced by drought and suffering from low prices. For 1992 both of these sectors are forecast to recover with total U.S. crop receipts rising 1 percent.

Major 1992 farm sector financial indicators have improved since early summer. Although current forecasts show crop receipts slightly less than were forecast in May, livestock and dairy receipts are higher. Coupled with higher Government payments, gross cash income has improved. Higher gross income and lower expenses leave net cash income higher than in May. September forecasts show net cash income of \$54-\$57 billion and net farm income of \$42-\$47 billion.

Food Grain Receipts Up Over 20 Percent

Food grains account for an average 10 percent of total crop receipts. The 1991/92 U.S. wheat crop was down more than 25 percent from 1990's estimate. At the same time, world wheat stocks were high, which depressed wheat prices 8 percent on a calendar year basis. As a result, U.S. wheat cash receipts totaled only \$5.7 billion, their lowest in 4 years.

For 1992, wheat analysts forecast production of 2.4 billion bushels, up over 20 percent from last year. Projections indicate a record spring wheat crop. Meanwhile, the calendar year all-wheat price is forecast to rise 18-22 percent. These production and marketing situations could raise 1992 wheat receipts to \$6-\$8 billion, up more than 25 percent from 1991 and near 1989's level.

Rice production is also forecast up this year, more than offsetting any potential price declines and contributing to an increase in rice receipts of 6-8 percent.

Record Corn Yields Possible

A dramatic turnaround in weather conditions will likely contribute to record corn yields. Acreage is up nearly 5 percent, leading to a forecast for 1992 production of 8.8 billion bushels.

Prices are expected to decline nearly 5 percent for the calendar year and be 13 percent lower for the crop year. If these conditions hold, 1992 corn cash receipts will likely be down 4 percent. Still, corn receipts will be higher than for all but the past 2 years. Larger 1992 crops are also forecast for grain sorghum and oats.

For the overall feed grain complex, lower prices from the higher feed grain production should not have a major effect on 1992 cash receipts, because a large share of the crop will not be sold until 1993. Typically, 40-60 percent of total annual marketings are sold in the year of harvest with the remainder moving into the marketing channel after year's end. First- and second-quarter 1992 prices exceeded 1991 prices, so 1992 receipts from the previous year's production sold in 1992 are partially offsetting lower third- and fourth-quarter 1992 prices. Total 1992 feed grain and hay cash receipts are forecast at \$17-\$19 billion, down 3 percent from last year.

Higher Corn Production To Boost Inventories

Higher 1992 corn production will likely lead to a net change in the value of inventories of \$2-\$4 billion, compared with less than \$500 million in 1991. The inventory adjustment figures prominently in the calculation of net farm income (but not net cash income) and can be positive or negative. The value of 1992 corn production stored for later sale is forecast larger than the value of previous years' production sold during 1992.

Oilseed Production at 7-Year High

U.S. oilseed production is forecast at 65.8 million tons, the largest crop since 1985/86. Much of the increase is com-

ing from expected record soybean yields benefiting from much above-normal rainfall and below-normal temperatures in the Corn Belt. However, if lower temperatures are a precursor to an earlier frost, the harvest could be reduced. September is critical to the determination of this year's crop and, ultimately, this year's soybean receipts.

Total oilseed cash receipts are forecast at \$11-\$13 billion, down 2 percent from 1991. Soybean receipts are down 1 percent and peanut receipts are down 5 percent.

Fruit Production Recovering; Cotton Prices Down

Citrus production was reduced last year due largely to a freeze in California in December 1990. While citrus prices rose to four times their normal level in response to the freeze, there were no oranges to market. For 1992, prices and production are forecast to return to normal, resulting in a 5-percent increase in receipts.

Both world and U.S. cotton supplies are high this year, depressing prices for 1992. First- and second-quarter 1992 prices averaged 50-55 cents, compared with 65-70 cents for the same period last year. This is pushing 1992 cotton cash receipt forecasts down 10-15 percent. Forecasts show cotton receipts of \$4-\$6 billion, about the same as in 1989. Cool, wet weather has adversely affected crop development. At the end of August, 35 percent of the crop was in poor or very poor condition.

Red Meat Receipts Off 7 Percent

On the livestock side, hog receipts show the largest percentage decline. Hog prices have been down since the first of the year, but production is up. Average annual hog prices are forecast near \$40, an amount at or just above cash costs

for large farrow-to-finish operations. If these prices continue, 1992 hog cash receipts will likely average \$9-\$11 billion, down 10 percent from last year and just above 1989's level. Cattle prices are also down, particularly for calves. This could lead to a 6-percent drop in cattle and calf receipts.

Dairy Receipts Recover From Price Drop

Milk prices dropped in August 1990 and continued low throughout 1991. For 1992, milk prices have been up 10 percent. This should cause dairy receipts to return to levels near the 1990 record.

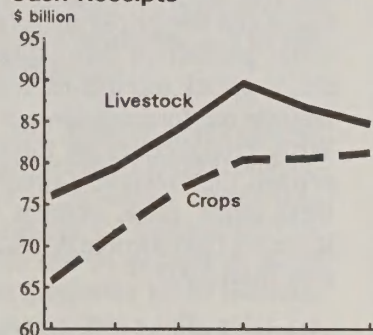
Disaster Payments Up

Total direct Government payments to farmers and ranchers are forecast up 17 percent for 1992. Total deficiency payments, however, are about the same as last year as lower food grain payments offset higher cotton payments. Two factors are causing the increase. First is the nearly \$1 billion in disaster payments made last spring for losses from 1990 and 1991 crops and the \$100 million announced September 2. Second is the additional 1 million acres accepted into the conservation reserve. Additional CRP payments are adding nearly \$100 million.

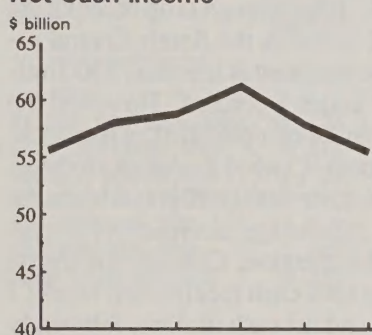
Expenses Increasing A Moderate 2 Percent

Overall input prices are up only slightly for 1992. For some inputs, like feeder livestock and seed, lower commodity prices are resulting in lower prices. When purchased quantities are factored in, expenses are forecast to decrease for feeder livestock (due to lower calf and hog prices) and interest (due primarily to lower interest rates). Other expense accounts are forecast to increase 2-5 percent, although hired and contract labor expenses are forecast up 8 percent due to higher wage rates and increased seasonal labor demand (primarily for fruits and vegetables).

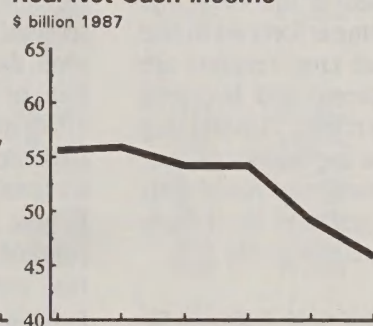
Cash Receipts



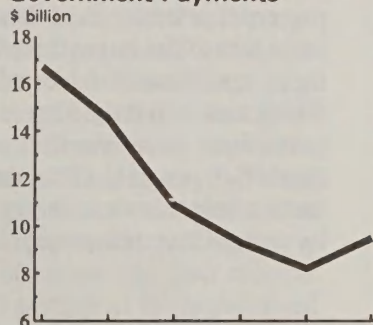
Net Cash Income



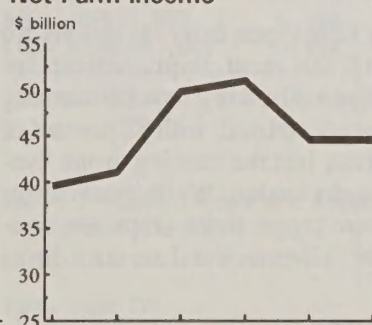
Real Net Cash Income



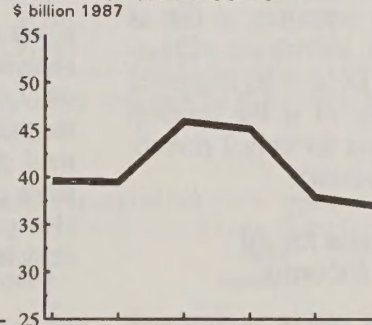
Government Payments



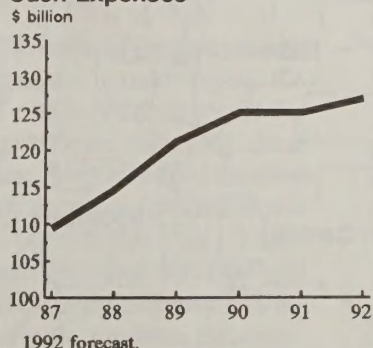
Net Farm Income



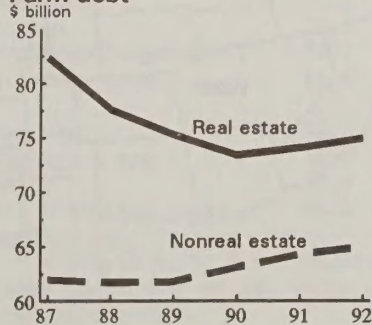
Real Net Farm Income



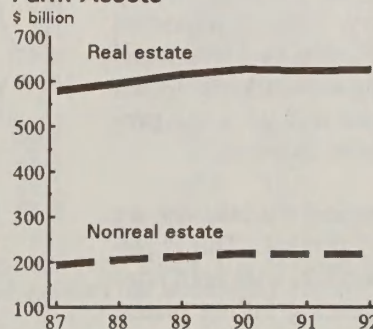
Cash Expenses



Farm debt



Farm Assets



1992 forecast.

Net Cash Income Up in Northeast, Down in Other Regions

Cash incomes are forecast up 3 percent in the Northeastern region, due in large part to stronger fruit and dairy sectors.

Cash receipts for wheat, fruits and nuts, greenhouse and nursery products, and dairy products are forecast up for 1992. The mix of these commodities in any particular region will have a major impact on that region's finances.

Fruits and Dairy Assisting Northeast

Of the five major U.S. agricultural regions, the Northeast is the only one where net cash income is forecast to rise in 1992. Northeast crop receipts are forecast up 1-2 percent and livestock receipts up 3-4 percent. Underlying these forecasts is the importance of livestock (primarily dairy) and fruits (primarily apples and grapes). Both dairy and fruit receipts are rising this year.

Dairy is the number one agricultural product in most Northeast States. The Northeast is the only region with higher livestock receipts. Although cash expenses are rising in all regions, Northeast expenses are not rising as fast as gross cash income, leaving the increasing net incomes. Despite its improved income, the Northeast is the smallest region and accounts for only 7 percent of U.S. net cash income.

Midwest Accounts for 40 Percent of U.S. Income

By far the largest region in terms of receipts and income, the Midwest is also one of the most diverse in terms of commodities produced. The Corn Belt part is the major corn, soybean, and hog area of the country. Dairy is important around the Great Lakes, and wheat and cattle predominate in the Plains. Given this mixture, where and what one produces will influence incomes.

For the overall region, net incomes are forecast down 4-5 percent. This is primarily due to livestock, with both hogs and cattle experiencing falling prices. The importance of wheat, the only major field crop with higher forecast receipts, is borne out by the forecast for

steady to slightly higher Midwest crop receipts. Total cash receipts are forecast down 1-2 percent.

South Central Region May See Largest Decline

Crop receipts are forecast to increase in all regions but the South Central. This is the major region for cotton, the commodity with the greatest decline in 1992 receipts. Even though crop receipts are forecast down in the South Central region, the decrease is less than \$500 million, or under 1 percent. However, the effect may be compounded by livestock, with South Central livestock receipts forecast down \$600 million. This is the largest percentage decrease (4-5 percent) of any region. Overall, this region may see total cash receipts fall nearly 3 percent and net cash incomes fall nearly 9 percent.

Dairy Farms Showing Most Improvement

Among farm types, dairy operations are showing the most improvement for 1992. Typically, dairy farms are among the most specialized, with 88 percent of total gross income coming from livestock product sales. While most dairies also grow crops, these crops are typically fed to livestock and are not a direct

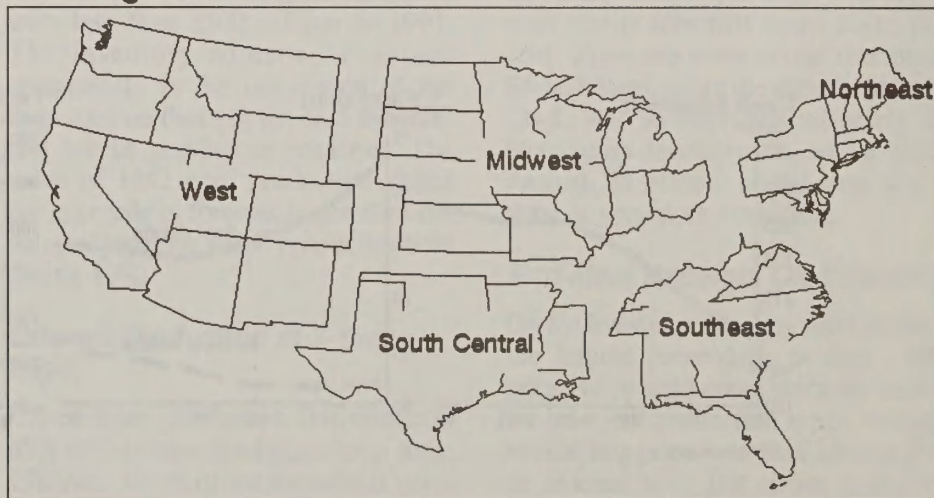
source of income. Net cash income for dairy operations is forecast at nearly \$4 billion for this year, up over 50 percent from 1991, but still more than 15 percent below the 1990 record.

Red meat operations are similar to dairies in that 82 percent of income comes from livestock sales, and crops are frequently grown but fed. This farm type includes the beef/hog/sheep complex. Cattle and hog prices are forecast down while production has expanded. On net, livestock receipts for red meat operations are forecast down 6-7 percent. While crop receipts are forecast up 1-2 percent, their relatively small impact on these farms' gross incomes will likely leave net cash income down 25-30 percent from 1991.

Grains Steady, Cotton Down

Cash grain farm net incomes are forecast steady to rising slightly for this year. Crop receipts are forecast up 1-2 percent for cash grain farms, due in large part to the importance of wheat to these operations. Livestock receipts, which make up only 10 percent of cash grain farm gross income, are forecast down 6-7 percent. This drop in livestock receipts is more than made up for by rising Government payments.

U.S. Regions



Cotton farm net income is forecast down 15-20 percent due to the projected decline in 1992 cotton prices. Cotton farms tend to be large and highly specialized, so incomes are almost entirely dependent on cotton sales.

Net Income by Sales Class

USDA's definition of a "farm" is any operation that has, or would normally have, at least \$1,000 in gross sales of agricultural products. Over 70 percent of U.S. farms are considered part-time or hobby operations with sales less than \$40,000. These small farms receive nearly twice as much income from sales of livestock as from crops. Although numerous, they account for an average of only 10 percent of total U.S. crop and livestock receipts, 16 percent of direct Government payments, and 18 percent of cash expenses.

More important to the Nation's agricultural economy are the 600,000 commercial farms with sales exceeding \$40,000. Nearly 25 percent of U.S. cash receipts and 31 percent of direct Government payments go to medium-size commercial farms with sales between \$100,000 and \$250,000, although this group makes up only 10 percent of farms.

An additional 20 percent of receipts go to the less than 1 percent of farms with sales exceeding \$1 million. These largest operations account for an average of 14 percent of Government payments, and 31 percent of cash expenses. While only 4 to 6 percent of cash grain sales go to these farmers, they receive nearly 25 percent of cotton and fruit receipts and 40 to 50 percent of the high-valued vegetable and greenhouse product receipts.

Smallest Farms Showing Negative Incomes

Given the importance of livestock to the smallest farms, one would expect the low hog and cattle prices forecast for 1992 to have a major effect on these farms' incomes. This is indeed the case with net cash income forecast down more than 15 percent this year. Those farms with sales less than \$20,000 will likely see increasingly negative net incomes. Farms in the medium-size commercial range are showing net income

down 2 percent, while net cash income for the largest sales class is forecast down 6 percent. Most cotton farms fall

into the largest sales class with declining cotton receipts underlying much of the drop in net income.

Table 1--Income components by region and sales class

Region or sales class	Cash receipts		Direct Government payments	Gross cash income	Cash expenses	Net cash income
	Crops	Livestock				

Million dollars						
1991P						
Northeast	4,344	7,141	111	12,045	7,944	4,101
Southeast	14,025	12,880	486	29,271	17,992	11,279
Midwest	29,626	37,973	4,588	74,765	50,951	23,814
South Central	9,260	13,815	1,697	25,990	18,554	7,436
West	23,292	14,938	1,285	41,035	29,751	11,284
1992F						
Northeast	4,413	7,385	149	12,367	8,142	4,225
Southeast	14,267	12,573	646	29,257	18,357	10,900
Midwest	29,757	36,822	5,267	74,215	51,479	22,736
South Central	9,184	13,222	2,002	25,544	18,762	6,782
West	23,730	14,653	1,460	41,248	30,355	10,893

1991P						
\$1,000,000 and over	15,676	18,489	323	35,382	22,422	12,960
\$500,000-\$999,999	9,573	8,232	634	18,874	12,167	6,707
\$250,000-\$499,999	16,127	12,020	1,413	30,486	19,242	11,244
\$100,000-\$249,999	19,710	17,679	2,552	41,198	27,091	14,107
\$40,000-\$99,999	11,919	17,628	1,914	32,992	21,778	11,214
\$20,000-\$39,999	4,207	6,970	723	12,844	9,167	3,677
Less than \$20,000	3,333	5,727	608	11,284	13,326	-2,042
1992F						
\$1,000,000 and over	15,793	18,077	376	35,081	22,763	12,318
\$500,000-\$999,999	9,627	7,994	740	18,767	12,352	6,415
\$250,000-\$499,999	16,210	11,768	1,648	30,490	19,535	10,955
\$100,000-\$249,999	19,909	17,440	2,976	41,498	27,504	13,994
\$40,000-\$99,999	12,101	17,225	2,232	32,988	22,110	10,878
\$20,000-\$39,999	4,309	6,703	844	12,737	9,307	3,430
Less than \$20,000	3,402	5,445	709	11,066	13,529	-2,463

P = preliminary; F = forecast. May not sum to U.S. totals due to rounding.

Table 2--Cash income and expenses for selected farm types

Farm type 1/	Gross cash income		Cash expenses		Net cash income	
	1991P	1992F	1991P	1992F	1991P	1992F
Billion dollars						
Cash grain	41.9	42.7	27.0	27.7	14.9	15.0
Tobacco	3.6	3.8	2.8	2.8	.9	.9
Cotton	7.6	7.1	3.6	3.8	4.0	3.3
Fruit/nut/vegetable	19.1	19.5	8.2	8.5	10.9	11.0
All crop farms	88.8	89.8	56.4	58.2	32.4	31.6
Red meat	52.7	50.2	38.1	38.3	14.7	11.9
Poultry & egg	14.0	13.5	8.4	8.5	5.6	5.0
Dairy	23.4	25.1	18.5	18.9	4.9	6.2
All livestock farms	94.3	92.8	68.8	69.7	25.4	23.1

P = preliminary; F = forecast. 1/ Farm types are defined as those with at least 50 percent of the value of production accounted for by a specified commodity group.

Farm Assets and Equity Up After Falling Slightly in 1991

Farm asset values are rising, led by increases in land values. Debt remains steady, so 1992 farm equity returns to near 1990 levels.

The U.S. farm sector's financial position is improving slightly in 1992. Farm real estate assets are forecast to increase slightly, returning to near 1990 levels, while farm debt is expected to rise \$0-\$1 billion. Farm equity is likely to return to near the 1990 level of \$710 billion.

Farm Asset Growth

The value of U.S. agricultural assets (excluding operator households) on December 31, 1992, is forecast at \$840-\$850 billion, up 2-3 percent from 1991.

The increase is due mostly to rising farm real estate values.

Nonreal estate assets are expected to increase slightly in 1992. Livestock and poultry values are expected to rise to \$68-\$72 billion. The farm value of machinery and equipment, which fell slightly in 1991, is expected to continue to decline slightly in 1992. The value of crop inventories rose to \$23.6 billion in 1991 and likely will remain steady in 1992. Farm financial assets are expected to continue increasing slightly to between \$39 and \$43 billion by the end of 1992.

Farm Debt Stabilizes

Total farm business debt increased about 1.5 percent in 1991, marking the end of 7 consecutive years of debt reduction (tables 3 and 4). This reversal is expected to continue through 1992, as total farm business debt is forecast to increase less than 1 percent. The \$3.7-billion increase in debt held by other lenders more than offset the \$1.7-billion decline in Farmers Home Administration (FmHA) loan balances. FmHA debt could decrease another \$2 billion in 1992, as the agency continues to work through its problem loan portfolio.

More on Foreign Ownership — Japan

Japanese investment in U.S. agriculture and agribusiness expanded in the 1980's in response to huge trade and current account surpluses. In the latter part of the decade, Japanese investors shifted from portfolio investment to real estate and overseas manufacturing.

- In January 1980, Japanese investment in U.S. farmland was only 25,000 acres, valued at \$54 million. Over the next 10 years, Japanese investment increased to 539,000 acres, valued at over \$1 billion. This put Japan seventh in acres of foreign-owned farmland and fourth in value of land. However, this amounted to only 3.7 percent of total foreign-owned U.S. farmland and less than 1 percent all U.S. farmland.
- Over half of Japanese-owned farmland, in terms of value, is located in Hawaii and California.
- A few large Japanese agribusiness companies established themselves in the U.S. during the 1970's. These companies primarily invested in ramen noodle production and in Alaskan fisheries. Investment in other agricultural areas took off in the late 1980's, increasing from \$381 million in 1980 to \$1.9 billion in 1990.
- In response to the 1988 U.S.-Japan Beef and Citrus Understanding, the Japanese began investing in the beef and citrus juice industries, vertically integrating ownership of production and processing. When transported by sea, 50 percent of U.S. beef is shipped on Japanese lines.
- Japanese companies currently control the third largest bottled water company in the U.S., the second largest vinegar company, 60 percent of Hawaii's bread-baking industry, more than 60 percent of Alaskan fish processing, and a majority interest in the 7-Eleven convenience store chain.

For more information, call Christine Bolling, ERS/USDA, (202) 219-0610.

Demand for agricultural loans did not increase rapidly in 1991, as farmers exhibited little desire either to expand their operations or to invest in new machinery. Farmers and lenders are expected to remain conservative about debt-financed expansion, as uncertainty concerning the strength of the economic recovery could continue to dampen demand for new loans.

Real and Nonreal Estate Debt Up Slightly in 1992

Farm real estate debt rose less than 1 percent in 1991, and is also forecast to rise less than 1 percent during 1992. Among institutional lenders, only commercial banks increased their real estate loan balances during 1991. FmHA debt dropped almost 8 percent, and life insurance company farm loans, which had increased over 6 percent in 1990, fell almost 2 percent. Several life insurance companies are anticipated to increase lending efforts as they more actively participate in Farmer Mac. Nevertheless, life insurance company debt is forecast to fall slightly in 1992.

Nonreal estate debt rose over 2 percent in 1991, and probably will increase less than 1 percent during 1992. Excluding the anticipated FmHA decrease, loan balances held by other lenders are expected to rise almost 3 percent. While

Table 3--Commercial bank debt to increase in 1992

Lender	1983	1986	1989	1990	1991	1992F
	Million dollars			Billion dollars		
Real estate	103,176	90,397	75,307	73,378	74	72 to 76
Federal Land Banks	44,316	35,589	26,657	25,144	25	24 to 26
Farmers Home Administration	8,572	9,712	8,126	7,544	7	5 to 7
Life insurance companies	11,666	10,374	9,038	9,599	9	8 to 10
Commercial banks	8,347	11,942	15,544	16,092	17	16 to 18
CCC storage facility	888	123	12	7	*	*
Individuals & others	29,386	22,657	15,929	14,992	15	15 to 17
Nonreal estate	87,888	66,563	61,826	63,080	64	63 to 67
Commercial banks	37,075	29,678	29,243	31,267	33	33 to 35
PCAs & FICBs	19,392	10,317	9,490	9,699	10	10 to 12
Farmers Home Administration	12,855	14,425	10,843	9,374	8	6 to 8
Individuals & others	18,566	12,143	12,250	12,740	13	12 to 14
Total debt (excluding CCC)	191,064	156,960	137,133	136,458	138	136 to 142

F = forecast. * = less than \$500 million.

farmers have lessened the demand for most nonreal estate loans, farm input suppliers, particularly cooperatives, appear to be offering favorable financing terms as an enticement to purchasers. Also, a significant increase in machinery purchases would likely raise the demand for loans from commercial banks, Production Credit Associations, and individuals and others (through farm machinery financing corporations).

Commercial banks continued to increase market share during 1991, as banks' real estate loans were up over 7 percent, while nonreal estate loans increased over 5 percent. The Farm Credit System (FCS) registered mixed results again in 1991, as real estate debt fell slightly while nonreal estate loans rose over 6 percent. FCS real estate loans are expected to decline slightly in 1992, while nonreal estate loans increase almost 5 percent.

Equity, Returns, and Cash Flow

Farm equity is expected to rebound to its 1990 level in 1992, after declining last year for the first time since 1986. Real farm equity (measured in 1987 dollars) is forecast to fall slightly for the fourth year in a row.

Rising farm sector asset values, returns on assets, and cash flow continue to support relatively high returns to farm assets and equity. Because returns to farm assets are forecast to rise at about the same rate as farm real estate values in 1992, the rate of return on farm assets from current income is expected to remain between 4 and 5 percent. The rate of return on equity from current income

Table 4--Nominal balance sheet shows improvement 1/

Year	Current dollars			Deflated dollars (1987\$) 2/		
	Assets	Liabilities	Equity	Assets	Liabilities	Equity
	Billion dollars					
1987-89	800.8	140.3	660.5	733.2	129.1	604.1
1990	846.5	136.8	709.8	747.4	122.3	625.1
1991	841.8	138.4	703.4	714.0	117.5	596.5
1992F	840 to 850	136 to 142	705 to 715	700 to 710	113 to 119	585 to 595

F = forecast. 1/ Excludes operator households and CCC commodity loans.
2/ Deflated by the GDP implicit price deflator, 1987=100.

Table 5--Rates of return on farm assets and equity 1/

Year	Returns to assets			Returns to equity		
	Income	Real capital gains	Total	Income	Real capital gains	Total
	Percent					
1987-89	5.0	.6	5.5	3.8	1.7	5.5
1990	5.2	-3.1	2.0	4.2	-2.8	1.4
1991	4.0	-4.9	-1.0	2.8	-5.1	-2.2
1992F	4 to 5	-1 to -2	2 to 3	3 to 4	-1 to -2	1 to 2

F = forecast. 1/ Excludes operator households. Totals may not add due to rounding. Returns to assets and equity are calculated using the average of the current and previous years' assets and equity, respectively.

is expected to range from 3 to 4 percent in 1992.

The projected total real (1987 \$) rate of return on assets, which includes returns from current income and returns from real capital gains, is expected to be between 2 and 3 percent in 1992. This reflects modest increases in land prices and in returns to farm assets. The total real rate of return on equity is expected to be between 1 and 2 percent.

The spread (total real return on assets minus real cost of debt) is expected to be between -4 and -5 percent in 1992. This suggests that debt financing may be somewhat less profitable for the farm sector in 1992.

Cash flow after interest (1987 \$) was about \$44.8 billion in 1991 and is expected to be about \$42-\$43 billion in 1992, reflecting somewhat lower expected real gross cash income and stable real gross cash expenses in 1992.

Economy Grew Slowly in the First Half of 1992

Some increase in growth is expected for the remainder of 1992 and 1993.

The economy continued its slow growth through the spring and summer of 1992. Real GDP growth slowed to an annualized 1.4 percent in the second quarter after growing 2.9 percent in the first. Efforts by consumers, business, and banks to reduce overall reliance on debt have slowed the recovery. However, as the burden of debt is reduced it should become less of a drag on growth. Some increase in economic growth is also supported by recent declines in inflation, interest rates, the value of the dollar, and by the improved condition of the banking system. Thus, the economy is likely to gain some momentum in the second half of 1992 and 1993.

Consumer and Business Spending To Improve By Late 1992

Real inflation-adjusted consumer spending fell \$1.9 billion in the second quarter. Cautious consumer spending has occurred for many reasons. Concerns over employment opportunities remained strong as civilian jobs expanded at a slow 1.6-percent annual rate and the unemployment rate reached its highest level since 1984. Employers remain hesitant to significantly expand payrolls in the presence of a relatively slow economic recovery and efforts to reduce production expenses. Slow gains in employment and wages, coupled with sharply lower household interest earnings, reduced growth in real disposable personal income to an annualized rate of 1.4 percent in the second quarter. Real disposable personal income grew at an annual rate of 4.0 percent in the first quarter.

Consumer spending has also been constrained by continued efforts to reduce real debt burdens. Consumers increased their savings and reduced their reliance on relatively expensive consumer installment credit, especially for automobiles, in the second quarter. The personal savings rate out of disposable personal income rose to 5.4 percent in the second quarter from 4.9 percent in the first. Consumer installment credit

fell at an annual rate of 2.9 percent in the second quarter. The continued weak rebound in residential home sales despite sharply lower mortgage rates further indicated that consumers remained very cautious about taking on new debt. As consumer debt burdens fall relative to income and asset holdings, the consumer spending outlook for late 1992 and 1993 should improve.

Except for spending on information and transportation equipment, business investment spending has been weak thus far in 1992. Business investment spending is being curtailed by weak increases in final demand and current excess capacity. However, efforts to be cost competitive with rivals will continue to spur business investment in durable equipment. Recent reductions in interest rates and sharply higher corporate profits will help reduce financing costs and constraints in investment spending. In the first half of 1992, non-financial corporate profits and retained earnings grew \$23.7 billion and \$23.1 billion respectively, after declining slightly in the last half of 1991.

In addition to raising equity capital through higher retained earnings, business firms continue to issue new corporate equity at a rapid pace. The increasing equity issuance reduces financial risk to business firms and their investors. Business firms have also reduced their dependence upon short-term debt by issuing many more corporate bonds. Bonds are generally preferred over short-term debt to finance long-term investment spending. The expected continued reduction in the relative importance of short-term debt on firms' balance sheets should also gradually improve the investment outlook. Business investment spending, while likely to be volatile from quarter to quarter, should be a source of gradually increasing strength to the economy over the next 18 months.

Falling Dollar Should Boost Exports

The rate of economic growth of many major U.S. trading partners has slowed significantly in 1992. Tight German monetary policy and declines in Japanese asset values have contributed to slow foreign growth. The slower foreign growth abroad was a key factor in the \$6.0-billion fall in U.S. exports in the second quarter. From March through July, the dollar fell at an annual rate of nearly 24 percent. By making U.S. exports less expensive and imports more expensive, the weaker dollar should boost U.S. trade, especially in 1993.

Inflation Remains Low

Inflation is likely to be very subdued. In the first half of 1992, the consumer price index (CPI) increased at an annual rate of 3.1 percent, while producer prices for finished goods increased at an annual rate of only 2.6 percent. Capacity utilization, which influences the prices of finished producer goods, remained low during December 1991-June 1992. Cost control efforts by business firms, coupled with an expanding labor force that pushed the unemployment rate to 7.8 percent by June, kept annualized wage increases to only 2.3 percent for the first half of the year. The very slow growth in wages and producer prices indicates little immediate pressure on consumer prices.

With capacity utilization likely to remain below levels normally associated with rising prices and only modest declines in the unemployment rate expected in the second half of 1992, inflation is likely to remain stable or decline slightly over the last half of 1992. Inflation is not likely to increase much in 1993, given the continuing excess capacity and a credible long-term anti-inflationary monetary policy by the Federal Reserve.

Interest Rates Fell Sharply in the Spring and Summer

Although interest rates fell sharply in the spring and summer, longer term interest rates, which are generally more important for business and household investment decisionmaking, have fallen considerably less than short-term rates. Still, the drop in interest rates should boost economic growth in the second half of 1992 and 1993.

The fall in short-term interest rates primarily reflects weaker than expected economic growth, sluggish private credit demand, and continued falling inflation. The Federal Reserve has responded to the slow economic growth and low inflation by continuing to reduce the Federal funds rate. The Federal funds rate, the rate at which banks lend to each other, fell from roughly 4 percent in the first quarter to roughly 3.25 in late August. Falling rates in the Federal funds market pushed other money market rates lower.

Spreads between bank lending rates and measures of bank funds costs have remained high. The 3-month large certificate of deposit (CD) rate declined from roughly 4.1 percent in the first quarter to just over 3.30 percent in mid-August. Over the same time the national prime bank rate declined from 6.50 percent to 6.0 percent. The spread of the bank prime over the 3-month CD rate is very large by historical standards.

The relatively high spreads reflect bank efforts to increase capital ratios, higher FDIC insurance premiums, and continued concern over loan quality.

As for long-term interest rates, 30-year Treasury bonds averaged 7.8 percent in the first quarter of 1992 but fell to roughly 7.4 percent in late August. Declining short-term interest rates, a slower than expected recovery, and a more favorable outlook for intermediate term inflation have all combined to push long-term interest rates lower.

On the foreign front, bonds of most other developed countries, after adjusting for inflation, are yielding more than inflation-adjusted U.S. bonds. The relative attractiveness of foreign bonds is encouraging domestic and foreign funds to flow to foreign bonds and away from U.S. bonds, thus pushing up U.S. bond yields.

Improving Bank Conditions Should Aid Recovery

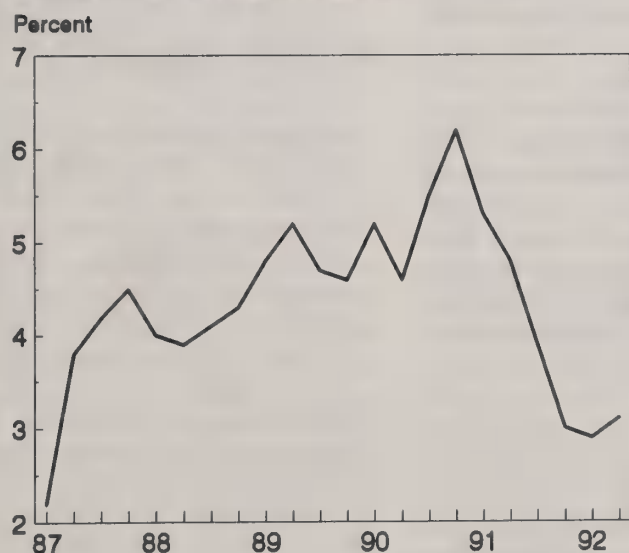
Economic growth has been slowed in the 1990's by weakness in bank balance sheets caused by problem loans. In the early 1990's the number of loans in full default or not paying interest in a timely manner increased. The reduction in loan quality reduced the ability and willingness of banks to expand credit, especially to smaller and weaker financial borrowers during the recession and early stages of the recovery.

Data for the first half of 1992 indicate that loan quality, bank profitability, and bank capital positions improved significantly compared with 1991. These improvements and increased bank liquidity indicate improved general credit availability from commercial banks. Despite improving bank conditions in 1992, commercial bank loans have been roughly flat since early 1991. The current weakness in loan growth reflects primarily weak demand, not a lack of credit availability. Loan growth should increase as loan demand and bank profitability continue to improve.

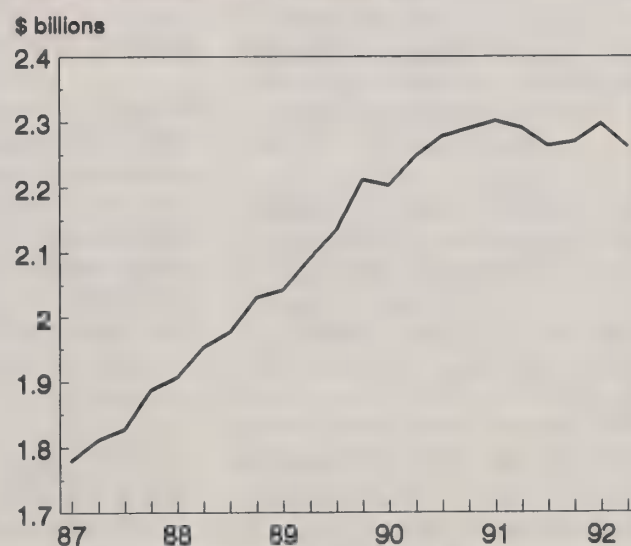
Implications for Agriculture

Conditions in agriculture should benefit from the overall prospects of somewhat faster growth, continued mild inflation, and a fall in the value of the dollar. Improving domestic real growth should provide support for agricultural commodities. Farmers should benefit from low inflation and interest rates, helping to minimize increases in farm interest expenses. If money market interest rates maintain current levels, short-term loan rates on farm loans at commercial banks may trend slightly downward in coming quarters. The fall in the value of the dollar thus far in 1992, if sustained, should strengthen foreign demand for agricultural products.

Consumer Price Inflation



Commercial Bank Loans



1991 State-Level Income and Balance Sheet Estimates

U.S. net farm income was the third highest on record in 1991, exceeded only in the 2 previous years. California and Texas continued to lead in net farm income.

State farm income and balance sheet estimates for 1991 have just become available (previously projections were only forecasts and only at the national level). The complete-year data required for the accounts are only available following the end of the year, usually April through June. These "first" estimates will be revised as additional data become available.

Overall, 1991 was generally a year of strong financial performance for farmers. Although it was the first year since 1984 in which incomes did not rise, they were down only in comparison to 1989 and 1990 when incomes were exceptionally high. It was the third consecutive year in which there was no major drought, and although prices for most commodities were down from a year earlier, they remained at relatively high levels. Acreage planted to crops was also down some, reflecting the lower commodity prices from the latter part of the prior year.

In 1990, U.S. farmers benefited from production and market conditions that led to exceptional earnings. Crop production was up slightly from the levels of 1989, and prices for most commodities were relatively high through at least the first half of the year. Cattle and calves contributed about \$3 billion in additional livestock receipts in 1990 and hogs added another \$2 billion. It was a year of rather remarkable livestock prices for both, with hog prices topping \$60 per hundredweight (cwt) for part of the year and beef cattle prices topping \$70 per cwt every month in 1990. In late 1991, hog prices retreated from those peaks.

Net farm income fell \$6.3 billion in 1991 to \$44.6 billion.¹ Production expenses remained virtually unchanged, declining only 0.1 percent (\$188 million). In addition, direct Government payments amounted to \$8.2 billion,

continuing a downward trend since the 1987 peak of \$16.7 billion.

1991 Prices and Production Down

Farmers experienced a general decline in commodity prices in 1991, plus crop production was down. The decline in value of production was about evenly split between livestock, as reflected in the drop in cash receipts, and crops, reflected in the absence of additions to inventory in contrast to 1990. (Positive inventory change reflects production not sold by the end of the year in which produced.) Cash receipts from sales of livestock and products were down about \$3.2 billion, due principally to a \$2.1-billion decline in sales of dairy products. The \$3-billion decline in additions to inventories was caused largely by lower corn and wheat production.

Gross farm income dropped 3.3 percent (\$6.5 billion). Cash receipts from farm marketings were down \$2.8 billion, with a \$3.2-billion decrease in livestock receipts and a \$548-million increase in crop receipts. Crop producers had less production in 1991 and generally sold it at prices below those existing in 1989 and early 1990.

Prices for livestock and livestock products were mostly down from 1990, when hog and cattle producers enjoyed market prices that were among the highest received in recent years. Milk prices, which had declined in the latter part of 1990, remained at depressed levels in the first half of 1991 before turning upward in the second half as farmers

cut back their dairy herds, limiting milk production.

California and Texas Continue To Lead in Income

As usual, California and Texas were the top two States in net farm income in 1991, even though it fell. Florida, Iowa, and North Carolina were next. States that are big producers of wheat, corn, and dairy products tended to have lower incomes, while those producing a combination of cotton, tobacco, peanuts, poultry, and greenhouse/nursery products experienced income gains. Overall, the top 10 States accounted for \$27.4 billion, or 53.6 percent, of U.S. net farm income, essentially unchanged from 1990.

Net farm income rose in 14 States in 1991, with a median increase of 16 percent, and declined in the other States by the same amount. The States with the largest percentage increases tended to have gains in a variety of commodities. South Carolina had higher sales from cotton, tobacco, tomatoes, and peaches. Sales of peanuts were up in Georgia and Alabama. Increased production of cattle that were still in inventory (herd) at year's end raised net farm income for Montana and Wyoming.

The largest percentage declines in net farm income tended to be in the Corn Belt and the dairy States. Much of this was attributable to lower receipts for corn and dairy products. Corn producers had less production in 1991 and generally sold it at prices below those existing in 1989 and early 1990.

California experienced the biggest change in net farm income, down \$1.5 billion. California crop receipts declined in excess of \$1 billion, on generally lower sales for most crops. This reflects the difficulties and adjustments relating to the reduced supply of irrigation water.

¹ Net farm income is the net value of goods and services produced within the calendar year—whether sold, consumed on the farm where produced, or held for future sale. This contrasts with net cash income, which is the net value sold in the calendar year, regardless of when produced.

State rankings of net farm income per operation and per acre did not change dramatically from 1990. As usual, those producing greenhouse/nursery products, citrus, and vegetables tend to lead the rankings on both bases. They tend to be heavily populated, coastal States, where land values are high and farming must compete with nonagricultural uses of the land. As a consequence, only high-value crops can outbid the competition.

In contrast, the principal farm income States (in the Midwest) and the major livestock producing States often are lower ranked on a per operation or per acre basis. Corn and livestock tend to be associated with low per operation and low per acre net farm income. The top 10 States, as ranked by net farm income per operation, experienced some minor shuffling of positions, but only one change in membership from the prior year: North Carolina replaced Idaho. Changes in the composition of the top 10 States for per acre net farm income involved the substitution of Georgia in the 10th position for Pennsylvania, which dropped to 13th. In

terms of change, 1991 was a rather uneventful year.

Regionally, States ranked highest in net farm income per operation usually were located in the Southeast, Northeast, and Pacific Coast. Those leading in net farm income per acre were all coastal States, reflecting production of specialty crops and poultry. Appalachian, Delta, Lake, and Corn Belt States had moderate net farm income per operation and per acre. The Northern Plains, Southern Plains, and Mountain States had high income per operation and low income per acre, indicative of large operations with low-value products on a per acre basis.

Production Expenses Steady

Total U.S. production expenses in 1991 were virtually unchanged from 1990, declining only 0.1 percent. Small increases in intermediate product expenses (1.2 percent) and property taxes (6.4 percent) were offset by declines in interest (4 percent) and net rent paid to nonoperator landlords (10.4 percent).

Among the States, there were no significant changes in expenses. More States experienced increases than declines, but changes in either direction tended to be small. There really were little discernible regional or commodity-related changes of consequence.

The composition and rank of the top 10 States in total expenses remained unchanged from the prior year. These States accounted for 51.1 percent of total expenses, a share virtually identical to the previous year. Per operation and per acre rankings remained essentially unchanged. Increases in per farm expenses usually occurred because of the number of farms in a State dropped, while the mix of commodities changed slowly, if at all.

Production expenses display the same regional patterns of per acre and per operation levels associated with net farm income. Rankings of per acre net farm income and total expenses coincide well.

Significant differences exist, however, between total and per operation rank-

Comparing USDA and IRS Farm Income Estimates

USDA farm income measures are not directly comparable to taxable income for farmers as a group or any subgroup, such as individual proprietors, who are sometimes referred to as family farmers. Confusion may arise when analysts attempt to directly compare the USDA's farm income series with statistics from the Internal Revenue Service derived as aggregations from Schedule F (the only tax data that can definitely be classified as farm-specific).

Comparing the statistics reported by the IRS to net farm income as reported by the USDA is difficult. The IRS does not count some farm income that is reported on other tax schedules not easily identifiable as related to farming, populations of individuals and firms covered by the IRS and USDA are different, and even the concepts of income and costs are different.

For example, USDA's net farm income is a measure of the agricultural

sector's net value of production, which is similar in concept to the Department of Commerce's Gross Domestic Product. It includes the production of all agricultural commodities and related services originating from any establishment meeting the USDA definition of a farm, regardless of its legal form of ownership or organization.

In contrast, much of the Sector's production does not get reported on Schedule F tax forms. Examples are sales that can be classified as capital assets and taxed as capital gains, particularly breeding and dairy livestock and forestry, and the billions of dollars of production owned by large integrated firms that process and market the produce. The USDA's net farm income includes \$1.5 to \$2 billion in net value of production for goods and services consumed on the farm where produced plus the imputed rent for operator dwellings. Neither gets reported on Schedule F because no value

is established as would be with a two-party market transaction.

In another significant aspect, the IRS reports that its research of small firms across all industries, including farming, has found substantial under-reporting of net income for purposes of determining tax liabilities. Without a thorough evaluation of the IRS data on tax compliance, the amount of income can only be estimated.

Another difference in USDA and IRS income statistics is that several hundred thousand individuals file a tax return using the farm schedule F but are not farmers by USDA's definition and data collection activities. USDA classifies a farm as an operation with normal farm product sales of \$1000 or more. Individuals who report farm returns to the IRS on average claim a loss of several thousand dollars each on their Schedule F.

ings of the two measures. Florida, North Carolina, Georgia, Arkansas, and Washington were among the top 10 in net farm income but outside in expenses, a reflection of the high-value commodities these States produce—broilers, greenhouse/nursery products, tobacco, fruit, etc. Conversely, Illinois, Kansas, Wisconsin, Indiana, and Missouri were among the top 10 in total expenses but were not in net farm income, because of the drop in milk prices and grain production.

In per operation rankings, Colorado, Hawaii, Idaho, Kansas, Wyoming, and

New Mexico were among the top 10 in total expenses but were not in net farm income. Florida, Rhode Island, Connecticut, Washington, and South Dakota were among the top 10 in net farm income but outside the top 10 in expenses. A high per operation ranking reflects the size of operations, which are often large in the cattle States, and high per acre value of production, common to the production of fruit, poultry, and greenhouse/nursery products.

Excluding operator households, California, Texas, and Iowa are the top three States whether ranked by assets, total

debt, real estate debt, or nonreal estate debt. Comparing real estate debt, Iowa farmers held the most FmHA debt, Illinois farmers held the most commercial bank debt, and California farmers held the most Federal Land Bank and the most life insurance company debt. Comparing nonreal estate debt, Iowa farmers held the most commercial bank debt, Texas farmers held the most FmHA debt, and California farmers held the most Farm Credit System debt and the most debt owed to individuals and others.

Table 6--Net farm income for States, 1990-91

State	1990			1991		
	Gross farm income	Total production expenses	Net farm income	Gross farm income	Total production expenses	Net farm income
1,000 dollars						
Alabama	3,310,588	2,392,186	918,402	3,500,113	2,346,774	1,153,339
Alaska	33,254	26,199	7,055	30,102	26,534	3,568
Arizona	2,076,139	1,451,540	624,599	1,982,586	1,463,966	518,620
Arkansas	4,977,693	3,674,827	1,302,866	5,151,416	3,726,301	1,425,115
California	20,162,887	13,071,571	7,091,316	18,882,989	13,277,911	5,605,078
Colorado	4,695,450	3,806,951	888,499	4,374,522	3,662,189	712,333
Connecticut	520,637	312,447	208,190	501,175	307,289	193,886
Delaware	698,068	507,633	190,435	697,085	522,228	174,857
Florida	5,939,851	3,655,210	2,284,641	6,389,108	3,668,397	2,720,711
Georgia	4,352,857	3,184,491	1,168,366	4,617,359	3,146,315	1,471,044
Hawaii	628,216	536,083	92,133	616,245	540,550	75,695
Idaho	3,332,544	2,250,677	1,081,867	2,921,565	2,180,587	740,978
Illinois	8,831,118	7,125,444	1,705,674	8,089,288	6,939,837	1,149,451
Indiana	5,465,516	4,468,403	997,113	4,763,085	4,297,979	465,106
Iowa	11,938,722	9,118,395	2,820,327	11,194,791	8,903,702	2,291,089
Kansas	8,554,276	7,146,280	1,407,996	7,959,464	7,042,243	917,221
Kentucky	3,551,002	2,453,243	1,097,759	3,631,134	2,559,438	1,071,696
Louisiana	2,253,278	1,640,112	613,166	2,150,102	1,589,411	560,691
Maine	557,028	382,398	174,630	486,164	377,177	108,987
Maryland	1,547,921	1,090,917	457,004	1,501,268	1,113,406	387,862
Massachusetts	505,417	334,266	171,151	527,566	336,612	190,954
Michigan	3,722,044	2,800,358	921,686	3,637,879	2,873,807	764,072
Minnesota	8,468,774	5,990,950	2,477,824	7,868,286	5,988,402	1,879,884
Mississippi	2,913,158	2,247,835	665,323	2,991,516	2,256,141	735,375
Missouri	4,747,721	3,828,324	919,397	4,660,120	3,850,397	809,723
Montana	2,085,038	1,719,670	365,368	2,225,726	1,710,332	515,394
Nebraska	10,278,838	8,063,766	2,215,072	9,776,773	7,821,895	1,954,878
Nevada	323,158	238,793	84,365	306,101	236,509	69,592
New Hampshire	177,859	134,735	43,124	173,498	130,708	42,790
New Jersey	761,123	510,666	250,457	755,060	523,707	231,353
New Mexico	1,605,412	1,274,007	331,405	1,677,730	1,324,924	352,806
New York	3,220,288	2,450,491	769,797	3,075,085	2,424,912	650,173
North Carolina	5,784,058	3,710,605	2,073,453	5,913,699	3,773,217	2,140,482
North Dakota	3,477,201	2,708,257	768,944	3,390,296	2,730,197	660,099
Ohio	4,760,917	3,699,855	1,061,062	4,230,478	3,567,325	663,153
Oklahoma	4,428,647	3,280,639	1,148,008	4,399,285	3,458,876	940,409
Oregon	2,934,536	2,048,717	885,819	2,900,586	2,070,076	830,510
Pennsylvania	4,071,238	3,042,074	1,029,164	3,755,310	3,022,080	733,230
Rhode Island	79,415	42,725	36,690	78,114	41,290	36,824
South Carolina	1,313,744	1,024,969	288,775	1,416,739	1,030,456	386,283
South Dakota	4,047,199	2,725,928	1,321,271	3,947,521	2,724,736	1,222,785
Tennessee	2,480,005	2,017,209	462,796	2,398,287	2,025,965	372,322
Texas	14,206,248	10,911,914	3,294,334	14,208,603	11,147,799	3,060,804
Utah	898,070	654,323	243,747	829,526	638,470	191,056
Vermont	494,910	394,752	100,158	472,257	380,977	91,280
Virginia	2,472,967	1,913,128	559,839	2,419,307	1,928,221	491,086
Washington	4,550,336	3,097,618	1,452,718	4,559,227	3,181,151	1,378,076
West Virginia	461,517	365,244	96,273	446,851	368,555	78,296
Wisconsin	6,489,139	4,835,748	1,653,391	5,991,510	4,804,806	1,186,704
Wyoming	846,793	713,160	133,633	1,023,515	823,085	200,430
United States	196,032,815	145,075,733	50,957,082	189,496,012	144,887,862	44,608,150

Table 7--Farm marketings, 1990 and 1991, Government payments, 1991, and principal commodities, 1991, by State

State	Farm marketings				Livestock and products	1991			Livestock and products	1991 Government payments	State rank for total farm marketings, four principal commodities in order of marketing receipts, and percentage of total marketings, 1991
	1990		1991			Crops	Total	Crops			
	Total	Crops	Total	Crops							
1,000 dollars											
AL	2,825,642	632,401	2,193,241	2,977,832	758,659	2,219,173	66,350	23-Broilers, cattle, greenhouse, peanuts (73%)			
AK	26,783	19,239	7,544	26,622	20,144	6,478	1,285	50-Greenhouse, dairy prod, hay, potatoes (79%)			
AZ	1,909,605	1,096,705	812,900	1,889,907	1,104,270	785,637	40,493	31-Cattle, cotton, dairy prod, lettuce (68%)			
AR	4,255,795	1,554,534	2,701,261	4,310,724	1,630,656	2,680,068	352,750	12-Broilers, cattle, soybeans, rice (67%)			
CA	19,157,859	13,624,361	5,533,498	17,886,698	12,614,557	5,272,141	260,825	1-Dairy prod, greenhouse, cattle, grapes (42%)			
CO	4,216,273	1,143,550	3,072,723	3,761,320	1,097,485	2,663,835	217,102	18-Cattle, corn, wheat, dairy prod (77%)			
CT	473,732	250,415	223,317	463,372	254,799	208,573	1,351	43-Greenhouse, eggs, dairy prod, tobacco (73%)			
DE	636,074	176,380	459,694	619,536	181,471	438,065	2,676	40-Broilers, soybeans, corn, greenhouse (82%)			
FL	5,744,158	4,483,485	1,260,673	6,140,999	4,969,337	1,171,662	40,786	8-Oranges, greenhouse, tomatoes, sugar (53%)			
GA	3,865,685	1,595,816	2,269,869	3,978,361	1,824,872	2,153,489	97,675	13-Broilers, peanuts, eggs, cattle (58%)			
HI	600,049	513,633	86,416	596,925	506,407	90,518	906	41-Sugar, pineapples, greenhouse, nuts (71%)			
ID	2,885,484	1,748,066	1,137,418	2,615,946	1,543,167	1,072,779	141,250	25-Cattle, potatoes, dairy prod, wheat (66%)			
IL	7,789,302	5,337,736	2,451,566	7,508,777	5,164,790	2,343,987	441,407	5-Corn, soybeans, hogs, cattle (87%)			
IN	4,910,528	2,870,996	2,039,532	4,474,513	2,581,688	1,892,825	210,055	11-Corn, soybeans, hogs, cattle (74%)			
IA	10,282,269	4,420,201	5,862,068	10,179,249	4,458,333	5,720,916	644,955	3-Hogs, corn, cattle, soybeans (91%)			
KS	7,019,508	2,023,972	4,995,536	6,934,986	2,132,539	4,802,447	697,895	7-Cattle, wheat, corn, hogs (86%)			
KY	3,102,922	1,404,334	1,698,588	3,178,704	1,474,727	1,703,977	73,416	21-Tobacco, cattle, horses, dairy prod (73%)			
LA	1,929,030	1,296,259	632,771	1,792,907	1,172,115	620,792	174,605	32-Cotton, cattle, sugar, soybeans (54%)			
ME	492,734	234,485	258,249	444,601	192,144	252,457	6,066	44-Potatoes, eggs, dairy prod, aquaculture (72%)			
MD	1,364,324	541,817	822,507	1,332,494	553,596	778,898	15,342	35-Broilers, greenhouse, dairy prod, soybeans (64%)			
MA	445,874	321,168	124,706	475,540	354,795	120,745	1,494	42-Greenhouse, cranberries, dairy prod, eggs (68%)			
MI	3,126,461	1,719,574	1,406,887	3,081,072	1,793,369	1,287,703	123,691	22-Dairy prod, corn, cattle, soybeans (52%)			
MN	6,884,615	3,135,241	3,749,374	6,936,001	3,359,081	3,576,920	435,819	6-Corn, dairy prod, soybeans, cattle (63%)			
MO	2,432,534	1,110,744	1,321,790	2,422,070	1,147,177	1,274,893	176,298	28-Cotton, broilers, cattle, soybeans (73%)			
MS	3,988,956	1,659,833	2,329,123	3,861,179	1,658,064	2,203,115	268,615	16-Cattle, soybeans, hogs, corn (65%)			
MT	1,654,141	765,972	888,169	1,531,169	740,741	790,428	320,133	33-Cattle, wheat, barley, hay (85%)			
NE	8,708,170	2,631,978	6,076,192	8,821,328	2,887,720	5,933,608	490,659	4-Cattle, corn, hogs, soybeans (89%)			
NV	323,953	114,813	209,140	275,836	88,746	187,090	5,679	47-Cattle, hay, dairy prod, potatoes (88%)			
NH	143,193	79,870	63,323	143,106	80,162	62,944	1,477	48-Dairy prod, greenhouse, apples, cattle (66%)			
NJ	650,390	454,725	195,665	660,160	463,641	196,519	4,051	39-Greenhouse, dairy prod, eggs, peaches (48%)			
NM	1,483,015	481,616	1,001,399	1,501,152	481,764	1,019,388	58,447	34-Cattle, dairy prod, hay, chili peppers (76%)			
NY	2,957,556	986,485	1,971,071	2,868,321	1,086,729	1,781,592	41,242	24-Dairy prod, greenhouse, cattle, apples (72%)			
NC	4,925,996	2,268,093	2,657,903	4,924,071	2,315,591	2,608,480	52,837	10-Tobacco, broilers, hogs, turkeys (59%)			
ND	2,531,800	1,730,438	801,362	2,556,147	1,856,912	699,235	533,853	26-Wheat, cattle, barley, sunflower (69%)			
OH	4,146,289	2,299,495	1,846,794	3,893,074	2,211,596	1,681,478	156,708	15-Soybeans, corn, dairy prod, hogs (65%)			
OK	3,541,987	1,200,374	2,341,613	3,807,582	1,040,142	2,767,440	290,922	17-Cattle, wheat, greenhouse, broilers (81%)			
OR	2,373,519	1,620,421	753,098	2,554,389	1,630,575	823,814	89,105	27-Cattle, greenhouse, dairy prod, wheat (47%)			
PA	3,757,065	1,043,313	2,713,752	3,503,040	1,033,280	2,469,760	34,364	19-Dairy prod, cattle, greenhouse, mushrooms (67%)			
RI	71,346	57,614	13,732	70,917	57,642	13,275	110	49-Greenhouse, dairy prod, eggs, potatoes (71%)			
SC	1,169,000	587,579	581,421	1,225,396	676,662	548,734	49,364	36-Tobacco, cattle, broilers, greenhouse (43%)			
SD	3,259,488	965,427	2,294,061	3,264,286	1,088,201	2,176,085	286,237	20-Cattle, hogs, corn, soybeans (75%)			
TN	2,060,947	950,360	1,110,587	1,977,569	932,514	1,045,055	70,331	30-Cattle, dairy prod, tobacco, cotton (59%)			
TX	11,831,478	4,080,572	7,750,906	12,126,182	4,212,188	7,913,994	777,925	2-Cattle, cotton, dairy prod, greenhouse (74%)			
UT	761,777	175,061	586,716	730,882	178,323	552,559	33,197	38-Cattle, dairy prod, hay, turkeys (73%)			
VT	456,045	59,513	396,532	433,140	65,556	367,584	3,339	45-Dairy prod, cattle, greenhouse, hay (90%)			
VA	2,121,725	738,892	1,382,833	2,095,371	732,426	1,362,945	26,616	29-Cattle, broilers, dairy prod, tobacco (57%)			
WA	3,798,445	2,402,296	1,396,149	3,946,524	2,656,614	1,289,910	206,084	14-Apples, dairy prod, cattle, wheat (57%)			
WV	339,111	69,886	269,225	330,237	77,050	253,187	5,421	46-Cattle, broilers, dairy prod, turkeys, (67%)			
WI	5,734,009	1,160,757	4,573,252	5,449,043	1,233,998	4,215,045	149,950	9-Dairy prod, cattle, corn, hogs (80%)			
WY	753,836	158,733	595,103	812,743	169,707	643,036	33,241	37-Cattle, sugar beets, hay, barley (88%)			
US	169,920,477	79,999,228	89,921,249	167,292,000	80,546,722	86,745,278	8,214,399	Cattle, dairy prod, corn, hogs (49%)			

Table 8--State rankings for net farm income: total, per farming operation, and per acre, 1991

Rank	Total		Per operation		Per acre	
	State	Value (\$1,000)	State	Value (dollars)	State	Value (dollars)
1	California	5,605,078	Florida	68,018	Rhode Island	558
2	Texas	3,060,804	California	67,531	Connecticut	462
3	Florida	2,720,711	Arizona	64,828	Delaware	307
4	Iowa	2,291,089	Delaware	60,296	Massachusetts	281
5	North Carolina	2,140,482	Rhode Island	52,606	New Jersey	263
6	Nebraska	1,954,878	Connecticut	49,714	Florida	259
7	Minnesota	1,879,884	Washington	37,245	North Carolina	223
8	Georgia	1,471,044	North Carolina	35,675	California	185
9	Arkansas	1,425,115	South Dakota	34,937	Maryland	172
10	Washington	1,378,076	Nebraska	34,909	Georgia	122
11	South Dakota	1,222,785	Idaho	34,625	Alabama	116
12	Wisconsin	1,186,704	Georgia	31,979	Arkansas	92
13	Alabama	1,153,339	Arkansas	30,981	Pennsylvania	91
14	Illinois	1,149,451	New Jersey	27,874	New Hampshire	89
15	Kentucky	1,071,696	Nevada	27,837	Washington	86
16	Oklahoma	940,409	Massachusetts	27,674	New York	78
17	Kansas	917,221	Colorado	27,397	Maine	77
18	Oregon	830,510	New Mexico	26,134	Kentucky	76
19	Missouri	809,723	Maryland	25,186	South Carolina	74
20	Michigan	764,072	Alabama	25,073	Michigan	71
21	Idaho	740,978	Iowa	22,462	Iowa	68
22	Mississippi	735,375	Oregon	22,446	Wisconsin	68
23	Pennsylvania	733,230	Wyoming	22,270	Louisiana	64
24	Colorado	712,333	Minnesota	21,362	Minnesota	63
25	Ohio	663,153	Montana	20,866	Vermont	60
26	North Dakota	660,099	North Dakota	20,003	Mississippi	57
27	New York	650,173	Mississippi	19,352	Virginia	56
28	Louisiana	560,691	Louisiana	18,690	Idaho	55
29	Arizona	518,620	New York	17,110	Oregon	47
30	Montana	515,394	Texas	16,545	Hawaii	44
31	Virginia	491,086	Hawaii	16,455	Ohio	42
32	Indiana	465,106	South Carolina	15,767	Nebraska	42
33	Maryland	387,862	Maine	15,350	Illinois	40
34	South Carolina	386,283	Wisconsin	15,022	Tennessee	30
35	Tennessee	372,322	New Hampshire	14,755	Indiana	29
36	New Mexico	352,806	Utah	14,365	Oklahoma	28
37	New Jersey	231,353	Michigan	14,149	South Dakota	28
38	Wyoming	200,430	Illinois	14,018	Missouri	27
39	Connecticut	193,886	Pennsylvania	13,835	Texas	23
40	Utah	191,056	Oklahoma	13,434	Colorado	22
41	Massachusetts	190,954	Kansas	13,293	West Virginia	21
42	Delaware	174,857	Vermont	13,229	Kansas	19
43	Maine	108,987	Kentucky	11,777	Utah	17
44	Vermont	91,280	Virginia	10,913	North Dakota	16
45	West Virginia	78,296	Ohio	8,289	Arizona	14
46	Hawaii	75,695	Missouri	7,568	Montana	9
47	Nevada	69,592	Indiana	7,155	New Mexico	8
48	New Hampshire	42,790	Alaska	6,371	Nevada	8
49	Rhode Island	36,824	Tennessee	4,280	Wyoming	6
50	Alaska	3,568	West Virginia	3,915	Alaska	4
	United States	44,608,150	United States	21,191	United States	45

Table 9--Value of farm business assets (excluding households), by State, December 31, 1991

State	Real estate		Nonreal estate				Financial assets		
	Land	Farm buildings	Livestock and poultry	Machinery and equipment	Crops	Purchased inputs	Other financial assets	Investments in coops	Total assets
Million dollars									
Alabama	5,574	928	1,073	1,212	115	15	163	464	9,544
Alaska	179	25	5	23	0	0	7	300	539
Arizona	9,021	388	552	434	38	35	61	157	10,686
Arkansas	9,188	1,466	1,101	1,619	134	31	215	687	14,440
California	55,135	5,400	3,603	4,177	311	194	942	1,596	71,358
Colorado	10,994	1,098	290	1,310	344	112	166	492	14,807
Connecticut	2,758	202	65	144	26	6	33	56	3,289
Delaware	967	176	29	155	36	1	17	53	1,435
Florida	20,177	1,635	1,185	1,424	39	19	245	867	25,593
Georgia	8,991	1,461	940	1,556	133	27	250	1,331	14,689
Hawaii	2,576	146	106	189	0	6	39	105	3,167
Idaho	7,278	736	1,209	1,204	643	48	109	260	11,486
Illinois	35,255	2,548	1,800	5,049	2,012	158	456	1,023	48,300
Indiana	15,870	2,176	1,162	3,021	1,168	114	294	1,009	24,813
Iowa	32,459	3,446	4,337	5,486	2,691	203	427	1,603	50,652
Kansas	18,993	1,296	3,670	3,472	475	61	287	640	28,901
Kentucky	9,273	1,948	1,604	2,105	773	38	316	662	16,719
Louisiana	6,556	615	597	1,224	80	9	155	-559	8,677
Maine	868	232	96	275	108	28	28	57	1,692
Maryland	3,570	597	63	678	160	11	80	221	5,379
Massachusetts	2,934	337	57	221	20	4	42	110	3,725
Michigan	7,930	1,640	1,046	2,477	529	87	252	516	14,478
Minnesota	19,427	3,253	2,345	4,953	1,871	205	347	1,720	34,120
Mississippi	7,553	721	737	1,394	134	17	178	611	11,345
Missouri	15,938	1,911	3,035	3,065	836	69	437	1,133	26,423
Montana	12,339	1,141	1,874	1,498	507	46	139	317	17,861
Nebraska	22,425	1,992	4,516	3,346	1,386	131	294	597	34,686
Nevada	2,061	287	336	131	56	6	25	46	2,949
New Hampshire	790	153	37	98	12	7	10	20	1,126
New Jersey	6,584	612	64	305	28	11	90	99	7,794
New Mexico	9,049	559	857	446	63	25	74	253	11,326
New York	5,446	1,810	1,258	1,887	534	64	197	538	11,733
North Carolina	8,717	1,281	816	1,882	238	30	249	792	14,005
North Dakota	12,894	1,050	1,288	2,631	813	87	195	1,115	20,074
Ohio	13,693	2,381	1,306	3,353	926	72	443	947	23,121
Oklahoma	12,853	1,027	3,122	2,059	256	37	339	602	20,295
Oregon	7,431	1,118	998	1,384	227	37	210	440	11,847
Pennsylvania	9,742	2,317	1,527	2,203	696	65	211	598	17,360
Rhode Island	341	41	6	27	2	0	5	11	431
South Carolina	3,997	364	352	780	60	34	110	501	6,199
South Dakota	12,861	1,386	2,659	1,922	863	86	162	494	20,433
Tennessee	8,444	1,224	1,319	2,017	348	31	358	745	14,485
Texas	53,789	3,112	8,633	5,636	583	252	1,241	1,724	74,970
Utah	3,701	320	583	470	113	14	60	51	5,311
Vermont	1,113	302	233	322	60	6	31	89	2,158
Virginia	8,049	1,656	1,084	1,389	297	24	235	533	13,267
Washington	9,608	1,524	1,007	1,696	334	62	204	445	14,879
West Virginia	1,473	308	295	358	90	6	72	43	2,646
Wisconsin	9,039	3,325	3,315	4,316	1,093	138	298	1,373	22,897
Wyoming	4,412	372	900	406	163	17	52	162	6,485
United States	550,316	64,043	69,093	87,428	22,424	2,793	10,848	27,650	834,595

Note: Totals may not add due to rounding.

Table 10--Real estate debt (excluding households), by State and lender, December 31, 1991

State	Federal Land Banks	Farmers Home Administration	Life insurance companies	Commercial banks	CCC storage and drying facilities	Individuals and others	Total
Million dollars							
Alabama	216	91	44	240	.08	100	691
Alaska	7	0	1	1	.00	4	19
Arizona	155	50	196	103	.00	125	629
Arkansas	492	253	277	464	.18	177	1,663
California	2,688	217	2,453	918	.03	1,203	7,479
Colorado	698	97	201	185	.20	331	1,512
Connecticut	49	13	0	21	.00	15	98
Delaware	87	12	0	36	.00	20	155
Florida	732	105	845	681	.20	304	2,668
Georgia	575	154	138	528	.13	144	1,539
Hawaii	108	29	30	46	.00	9	222
Idaho	479	214	156	33	.19	294	1,177
Illinois	1,192	290	438	1,344	.45	800	4,065
Indiana	1,736	229	261	758	.02	694	2,679
Iowa	1,248	396	549	1,236	.52	1,820	5,249
Kansas	1,002	241	195	608	.00	381	2,427
Kentucky	371	247	114	594	.05	251	1,578
Louisiana	226	126	159	164	.25	87	761
Maine	38	49	0	6	.04	14	107
Maryland	281	36	10	98	.00	108	534
Massachusetts	48	23	21	7	.00	16	115
Michigan	657	162	34	198	.22	339	1,390
Minnesota	980	262	210	711	1.24	951	3,115
Mississippi	293	241	286	321	.12	139	1,279
Missouri	582	333	203	927	.11	538	2,584
Montana	549	178	195	143	.07	503	1,568
Nebraska	746	336	352	686	.17	579	2,700
Nevada	67	18	36	3	.00	46	170
New Hampshire	14	7	0	3	.00	7	32
New Jersey	137	24	0	26	.00	66	253
New Mexico	200	64	68	114	.00	130	576
New York	397	153	9	114	.11	212	885
North Carolina	625	219	82	302	.01	147	1,375
North Dakota	779	309	35	278	.12	277	1,678
Ohio	620	164	125	568	.10	372	1,849
Oklahoma	606	299	157	333	.01	313	1,709
Oregon	482	106	432	78	.03	482	1,581
Pennsylvania	466	125	11	434	.01	210	1,246
Rhode Island	8	3	0	2	.00	1	14
South Carolina	303	83	16	70	.03	52	524
South Dakota	475	352	49	176	.29	329	1,381
Tennessee	371	211	37	357	.13	138	1,114
Texas	1,924	346	543	848	.06	930	4,592
Utah	137	57	11	36	.12	126	367
Vermont	60	43	0	45	.02	28	176
Virginia	629	87	86	218	.06	135	1,155
Washington	478	147	314	181	.18	340	1,460
West Virginia	75	43	79	51	.00	21	268
Wisconsin	872	252	57	767	.97	570	2,519
Wyoming	183	43	78	31	.01	114	450
United States	25,144	7,544	9,599	16,092	6.51	14,992	73,377

Note: Totals may not add due to rounding.

Table 11--Nonreal estate debt (excluding households), by State and lender, December 31, 1991

State	Commercial banks	PCAs and FICBs	Farmers Home Administration	Individuals and others	Total	CCC commodity loans
Million dollars						
Alabama	221	186	97	213	716	8
Alaska	4	0	0	2	6	0
Arizona	423	69	105	158	755	27
Arkansas	525	110	320	313	1,267	316
California	2,829	1,229	504	1,067	5,629	202
Colorado	676	160	77	429	1,341	53
Connecticut	24	63	■	25	120	0
Delaware	60	40	5	56	161	1
Florida	284	223	165	279	950	1
Georgia	309	153	388	284	1,133	9
Hawaii	40	49	11	29	129	0
Idaho	677	120	145	196	1,138	40
Illinois	1,964	261	202	545	2,972	420
Indiana	906	311	177	380	1,774	170
Iowa	2,859	169	368	819	4,216	625
Kansas	2,018	228	162	691	3,099	99
Kentucky	405	161	173	181	919	28
Louisiana	252	172	492	136	1,053	107
Maine	24	73	61	38	196	0
Maryland	43	211	19	116	388	7
Massachusetts	72	75	12	25	184	0
Michigan	357	337	231	236	1,161	78
Minnesota	1,669	488	355	551	3,063	516
Mississippi	327	84	564	182	1,157	177
Missouri	1,023	133	285	331	1,772	86
Montana	478	88	251	121	938	66
Nebraska	2,384	185	231	808	3,608	471
Nevada	18	32	9	20	77	0
New Hampshire	1	22	4	10	37	■
New Jersey	15	79	27	37	159	2
New Mexico	194	45	47	129	414	7
New York	417	416	219	216	1,268	18
North Carolina	260	305	167	356	1,087	19
North Dakota	744	373	447	198	1,762	211
Ohio	517	266	173	318	1,274	103
Oklahoma	1,200	141	391	287	2,019	19
Oregon	405	136	87	145	773	22
Pennsylvania	249	347	113	288	997	9
Rhode Island	0	15	■	3	20	0
South Carolina	77	64	151	94	386	5
South Dakota	1,058	136	404	233	1,830	132
Tennessee	232	164	244	201	841	26
Texas	2,460	769	769	986	4,984	145
Utah	134	63	34	58	290	2
Vermont	37	76	17	37	168	0
Virginia	180	271	126	166	743	■
Washington	1,026	56	101	228	1,412	55
West Virginia	24	46	23	29	121	1
Wisconsin	955	445	374	413	2,187	81
Wyoming	216	54	37	78	385	2
United States	31,267	9,699	9,374	12,740	63,081	4,377

Note: Totals may not add due to rounding.

Table 12--Farm balance sheet components (excluding households), by State, December 31, 1991

State	Assets			Debt			Equity	Debt to asset ratio
	Real estate	Nonreal estate	Total	Real estate	Nonreal estate	Total		
Million dollars								Percent
Alabama	6,502	3,042	9,544	691	716	1,407	8,138	14.7
Alaska	204	335	539	19	6	26	514	4.7
Arizona	9,409	1,277	10,686	629	755	1,385	9,302	13.0
Arkansas	10,654	3,787	14,440	1,663	1,267	2,930	11,510	20.3
California	60,535	10,823	71,358	7,479	5,629	13,108	58,250	18.4
Colorado	12,092	2,715	14,807	1,512	1,341	2,854	11,953	19.3
Connecticut	2,960	330	3,289	98	120	219	3,071	6.7
Delaware	1,143	292	1,435	155	161	316	1,119	22.0
Florida	21,812	3,780	25,593	2,668	950	3,618	21,975	14.1
Georgia	10,452	4,237	14,689	1,539	1,133	2,672	12,016	18.2
Hawaii	2,722	445	3,167	222	129	351	2,816	11.1
Idaho	8,014	3,472	11,486	1,177	1,138	2,314	9,172	20.1
Illinois	37,802	10,498	48,300	4,065	2,972	7,037	41,263	14.6
Indiana	18,046	6,767	24,813	2,679	1,774	4,454	20,359	17.9
Iowa	35,905	14,746	50,652	5,249	4,216	9,465	41,187	18.7
Kansas	20,289	8,613	28,901	2,427	3,099	5,526	23,376	19.1
Kentucky	11,222	5,497	16,719	1,578	919	2,498	14,221	14.9
Louisiana	7,171	1,506	8,677	761	1,053	1,814	6,863	20.9
Maine	1,101	591	1,692	107	196	304	1,388	17.9
Maryland	4,166	1,212	5,379	534	388	922	4,457	17.1
Massachusetts	3,271	454	3,725	115	184	299	3,426	8.0
Michigan	9,570	4,908	14,478	1,390	1,161	2,551	11,928	17.6
Minnesota	22,681	11,439	34,120	3,115	3,063	6,178	27,942	18.1
Mississippi	8,274	3,070	11,345	1,279	1,157	2,436	8,909	21.5
Missouri	17,849	8,574	26,423	2,584	1,772	4,356	22,068	16.5
Montana	13,480	4,381	17,861	1,568	938	2,506	15,354	14.0
Nebraska	24,416	10,270	34,686	2,700	3,608	6,308	28,378	18.2
Nevada	2,348	601	2,949	170	77	247	2,702	8.4
New Hampshire	943	183	1,126	32	37	69	1,057	6.2
New Jersey	7,195	598	7,794	253	159	412	7,382	5.3
New Mexico	9,608	1,718	11,326	576	414	990	10,336	8.7
New York	7,256	4,478	11,733	885	1,268	2,154	9,579	18.4
North Carolina	9,998	4,008	14,005	1,375	1,087	2,462	11,544	17.6
North Dakota	13,945	6,129	20,074	1,678	1,762	3,440	16,633	17.1
Ohio	16,074	7,047	23,121	1,849	1,274	3,123	19,998	13.5
Oklahoma	13,880	6,416	20,295	1,709	2,019	3,727	16,568	18.4
Oregon	8,550	3,297	11,847	1,581	773	2,353	9,493	19.9
Pennsylvania	12,060	5,300	17,360	1,246	997	2,244	15,116	12.9
Rhode Island	382	50	431	14	20	34	397	7.9
South Carolina	4,360	1,838	6,199	524	386	909	5,289	14.7
South Dakota	14,247	6,186	20,433	1,381	1,830	3,211	17,223	15.7
Tennessee	9,668	4,817	14,485	1,114	841	1,954	12,531	13.5
Texas	56,901	18,069	74,970	4,592	4,984	9,575	65,395	12.8
Utah	4,021	1,290	5,311	367	290	657	4,654	12.4
Vermont	1,415	742	2,158	176	168	344	1,814	15.9
Virginia	9,705	3,562	13,267	1,155	743	1,898	11,369	14.3
Washington	11,132	3,747	14,879	1,460	1,412	2,872	12,008	19.3
West Virginia	1,781	864	2,646	268	121	389	2,257	14.7
Wisconsin	12,365	10,533	22,897	2,519	2,187	4,706	18,191	20.6
Wyoming	4,784	1,700	6,485	450	385	835	5,649	12.9
United States	614,359	220,236	834,595	73,377	63,081	136,458	698,138	16.4

Note: Totals may not add due to rounding.

Farm Financial Performance by Farm Credit District, 1980, 1985, and 1990

by Ken Erickson and Sean Chance¹

Abstract: U.S.-level measures of farm financial performance mask regional variations. Farm Credit System district-level measures help to identify these variations, and to relate changes in net returns by region to changes in balance sheet values, capital investment, and profitability across regions.

Keywords: Farm Credit System, financial performance

The farm financial crisis of the 1980's taught economists to look at both balance sheet and income statement relationships to understand farm sector investments and returns. Financial ratios like rates of return on farm equity can serve as useful measures of the relative performance among farms. However, the considerable diversity in financial performance across U.S. farms is not reflected in U.S.-level estimates. If interpreted carefully, regional estimates may yield additional knowledge.

This article examines and compares the financial performance of U.S. farms by Farm Credit District for 1980, 1985, and 1990, the 3 years corresponding to the beginning, peak, and recovery periods of the "farm financial crisis." Key farm financial performance measures—equity, return to farm assets and equity, returns to farm operators, net cash flow, debt-to-returns to farm assets, debt-to-net cash flow, and farm debt by lender—are estimated from data published in USDA's *Economic Indicators of the Farm Sector: State Financial Summary*. They do not represent all farms in a given FCS district, but rather an "average" or composite of all farms. They include both "commercial" farms, and those earning less than \$40,000 per year. They are sector-based (including all U.S. agriculture), not farm-level estimates (such as Dodson and Banker's study (1) of farm operators which used USDA's Farm Costs and Returns Survey). Estimates in this

article do not include revisions to 1990 estimates made in August, 1991.

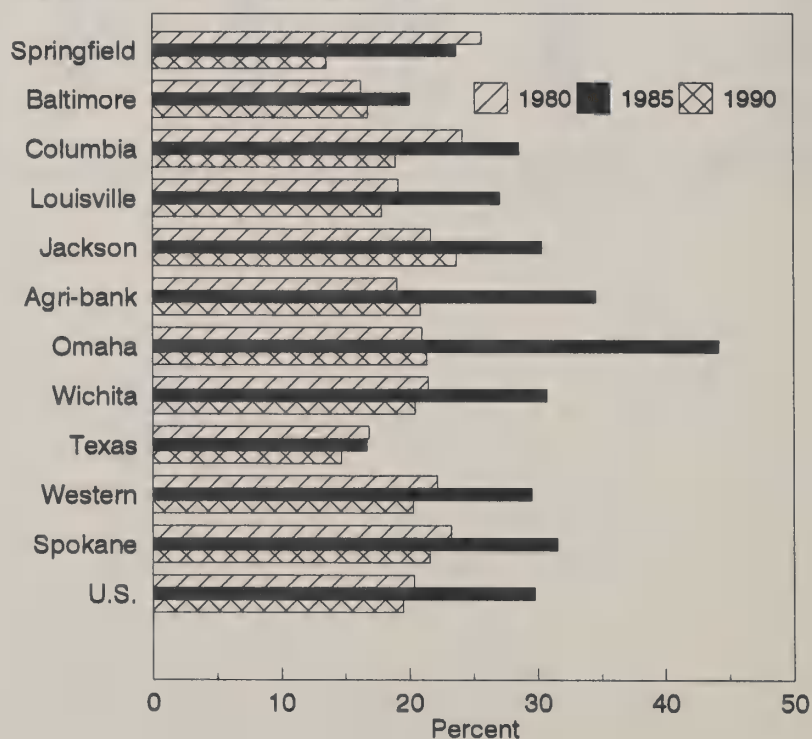
Debt/Equity Ratios Peaked in 1985

The debt-to-equity ratio, which measures the relative proportion of funds provided by creditors (debt) and owners (equity), peaked in 1985 for all FCS districts except Springfield and Texas (where it declined and continued declining in 1990). The highest debt-to-equity ratios for the 3 years were found in the Agri-bank and Omaha districts, while the Texas district remained consistently low (figure A-1).

Farm Equity, Returns to Equity, And Rates of Return by FCS District

Farms in what is the newly formed Agri-bank district held about 25 percent of total farm sector equity in 1980, but only about 21 percent in 1990. Springfield, Baltimore, Columbia, Texas, Western, and Spokane districts reached larger percents of total U.S. equity. Returns to equity were negative for many of the districts in 1980 and 1985. However, the Western district had positive returns in both years and they nearly doubled in 1990 (table A-1).

Figure A-1
Debt-to-Equity Ratios by FCS District
and U.S., 1980, 1985, and 1990



¹ Erickson is an agricultural economist in USDA's Economic Research Service and Chance was an ERS intern from the University of Florida, Food and Resource Economics Department.

Table A-1--Farm equity, returns to farm equity, and returns to equity by FCS district, 1980, 1985, and 1990

FCS district	Equity			Returns to farm equity			Return to equity 1/		
	1980	1985	1990	1980	1985	1990	1980	1985	1990
	Billion dollars						Percent		
Springfield	16.18	17.70	28.12	-.14	.09	.62	-.9	.5	2.2
Baltimore	35.13	30.41	34.34	-1.08	-.25	-.01	-3.2	-.8	-.0
Columbia	51.10	42.49	50.85	-.36	2.47	3.82	-.7	5.7	7.5
Louisville	88.16	59.64	67.11	-.58	.72	.85	-.7	1.2	1.3
Jackson	36.65	26.98	23.91	-.74	.33	1.25	-2.2	1.2	5.1
Agri-bank	205.12	123.59	149.61	-.57	3.09	4.30	-.3	2.3	3.0
Omaha	124.54	62.13	92.46	-.59	3.10	4.58	-.5	4.6	5.1
Wichita	74.15	52.34	64.04	-1.09	.66	1.82	-1.5	1.2	2.9
Texas	62.78	74.19	65.28	-.65	.41	2.16	-1.1	.5	3.3
Western	72.13	64.22	77.69	2.61	3.13	6.14	3.9	4.7	8.1
Spokane	50.55	41.34	46.56	-.70	-.11	2.49	-1.5	-.3	5.4
U.S.	816.49	595.02	699.96	-3.89	13.64	28.01	-.5	2.2	4.1

1/ This return on equity excludes real capital gains and losses.

In 1990, farms in the Columbia district held 7.3 percent of U.S. farm equity but earned 13.6 percent of U.S. returns to farm equity and Western district farms held 11.1 percent of U.S. farm equity and earned 21.9 percent of U.S. returns to farm equity. By contrast, Wichita held 9.1 percent of U.S. farm equity but earned only 6.5 percent of the U.S. returns to farm equity.

The Columbia and Western districts came out of the financial crunch of the 80's in a relatively strong position, with rates of return on equity nearly twice the U.S. average. At the other end of the scale, Springfield, Baltimore, and Louisville districts' farms earned less than half the U.S. average.

The total rate of return on farm equity (which includes the rate of return from real capital gains or losses) varied considerably across FCS districts over these years, primarily reflecting the buoyancy of unrealized capital gains and losses on farmland. In 1985, only Springfield, Baltimore, Columbia, and Louisville FCS districts showed total rates of return on equity above the U.S. average (-12.8 percent). In 1990, Columbia, Agri-bank, Omaha, Wichita, Western, and Spokane districts' farms earned rates of return near the U.S. average (2.1 percent).

Cash Flow Ratios Vary

Debt-to-returns to farm assets, debt-to-net cash flow, and real net cash flow after interest (1987\$) vary considerably by FCS district (tables A-2 and A-3). The debt-to-returns to farm assets and the debt-to-net cash flow ratios reflect the ability of farm operations to meet debt obligations from current income

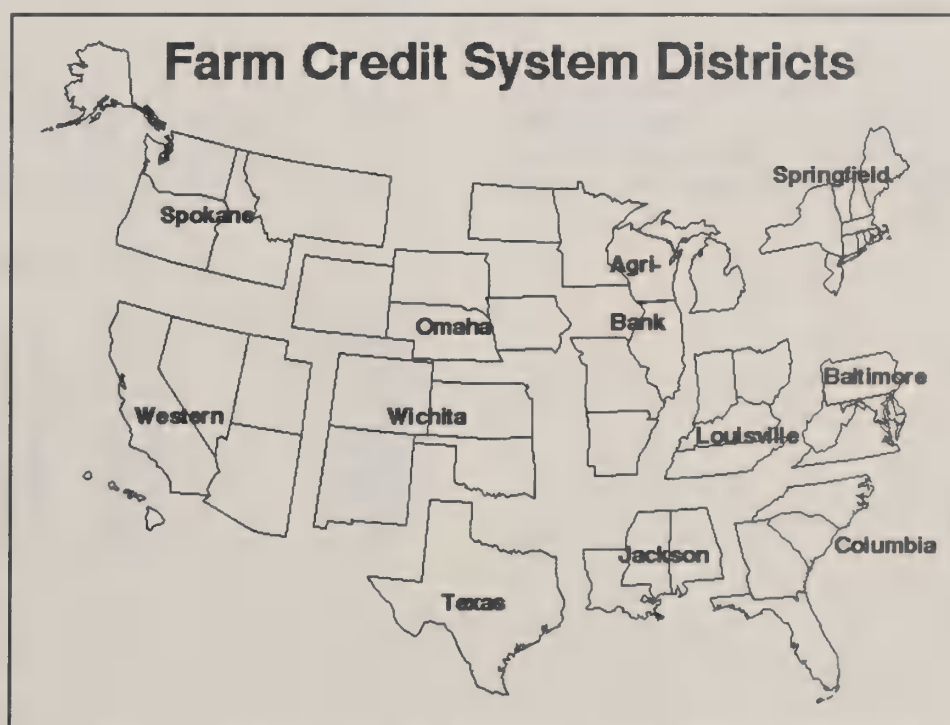
and cash flow. Net cash flow after interest payments represents the funds available to farm investors, by FCS district, to purchase farmland, machinery and equipment, and other capital investments.

In 1980, many farm operators were hard pressed to meet debt payments out of current income and cash flow. The debt-to-returns to farm assets and debt-to-net cash flow ratios were considerably above historic levels. In 1980, Wichita, Texas, and Spokane district farms had debt-to-returns to farm assets ratios over twice the U.S. average of 14.2. Farms in the Jackson and Baltimore FCS districts had negative debt-to-returns to farm assets ratios because of negative returns to farm assets. Baltimore and Spokane districts had high

ratios of debt-to-net cash flow relative to the U.S. average.

Although by 1990 these ratios had fallen dramatically from 1980 levels, Baltimore and Louisville districts still had high ratios of debt-to-returns to farm assets. However, the ratios of debt-to-net cash flow in 1990 were all close to the U.S. average of 2.42.

Between 1980 and 1985, the biggest changes in real net cash flow (1987\$) occurred in the Louisville, Jackson, Agri-bank, Wichita, Western, and Spokane districts. These followed the overall U.S. decline in real net cash flow of \$52.5 billion in 1980 to \$31.9 billion in 1985. By 1990, net cash flow as a share of the U.S. total rose from 2.09 percent to 3.51 in the Jackson district;



from 3.28 percent to 7.17 percent in Wichita; from 12.19 to 15.86 percent in Western; and from 4.45 to 7.29 percent in the Spokane district. Farm investors in these districts received higher cash returns in 1990 compared to 1985.

Jackson District Borrowed Most FmHA Debt; Omaha and Wichita Borrowed Most from Commercial Banks

FmHA provides financing for farmers unable to obtain credit elsewhere at reasonable rates and terms. When debt by lender by FCS district is compared for 1980, 1985, and 1990, the percent of total U.S. Farmers Home Administration debt held by farms was highest in the Jackson district (about 22 percent in 1980 rising to nearly 29 percent in 1990) and lowest in the Western district (6-7 percent each of the 3 years). FmHA debt as a percent of total farm debt rose most in the Louisville and Jackson districts, and has since fallen in nearly all districts, especially in the Columbia FCS district (table A-4).

The percent of total U.S. commercial bank debt was highest in the Omaha and Wichita districts (from about 27 percent in 1980 to over 40 percent in 1990). From 1985 to 1990, commercial bank debt shares rose in the Columbia, Louisville, Jackson, Agri-bank, Omaha, Wichita, and Spokane districts.

Reference

1. Dodson, Charles B., and David Banker. "Farm Financial and Economic Conditions by Farm Credit System District." *Agri Finance*. Century Communications, Niles, Ill. December 1991.

Table A-2--Debt-to-returns to farm assets and debt-to-net cash flow, by FCS district, 1980, 1985, 1990

FCS district	Farm debt	Returns to farm assets	Net cash flow	Debt-to-returns to farm assets	Debt-to-net cash flow
		Billion dollars		Ratio	
Springfield					
1980	4.164	.239	.835	17.45	4.98
1985	4.196	.495	1.039	8.48	4.04
1990	3.834	.975	1.929	3.93	1.99
Baltimore					
1980	5.737	-.601	.587	-9.55	9.77
1985	6.115	.335	1.239	18.27	4.93
1990	5.769	.563	2.418	10.24	2.39
Columbia					
1980	12.368	.747	3.120	16.55	3.96
1985	12.136	3.730	2.902	3.25	4.18
1990	9.661	4.807	5.702	2.01	1.69
Louisville					
1980	16.950	.992	4.180	17.08	4.05
1985	16.155	2.282	3.091	7.08	5.23
1990	12.029	2.083	4.362	5.78	2.76
Jackson					
1980	7.949	-.003	1.807	-3,030.69	4.40
1985	8.194	1.187	.631	6.90	13.00
1990	5.656	1.833	1.978	3.09	2.86
Agri-bank					
1980	39.127	3.152	9.696	12.41	4.04
1985	42.793	7.328	7.833	5.84	5.46
1990	31.198	7.506	1.247	4.16	2.77
Omaha					
1980	26.142	1.974	4.887	13.24	5.35
1985	27.455	5.686	5.198	4.83	5.28
1990	19.819	6.547	7.779	3.03	2.55
Wichita					
1980	15.949	.460	2.060	34.65	7.74
1985	16.127	2.413	.988	6.68	16.32
1990	13.096	3.193	4.043	4.10	3.24
Texas					
1980	10.639	.304	2.006	34.97	5.30
1985	12.368	1.705	2.178	7.25	5.68
1990	9.575	3.176	3.856	3.01	2.48
Western					
1980	16.012	4.111	6.233	3.89	2.57
1985	18.985	5.084	3.670	3.73	5.17
1990	15.748	7.691	8.942	2.05	1.76
Spokane					
1980	11.786	.367	2.227	32.15	5.29
1985	13.066	1.159	1.341	11.27	9.75
1990	10.071	3.469	4.112	2.90	2.45
U.S.					
1980	166.823	11.743	37.639	14.21	4.43
1985	177.590	31.403	30.111	5.66	5.90
1990	136.458	41.843	56.367	3.26	2.42

Table A-3--Net cash flow (NCF) after interest (1987\$), and as a percent of U.S., by FCS district, 1980, 1985, 1990

FCS district	NCF after interest (1987\$)			As percent of U.S.		
	Billion dollars			Percent		
	1980	1985	1990	1980	1985	1990
Springfield	1.17	1.10	1.71	2.22	3.45	3.42
Baltimore	.82	1.31	2.14	1.56	4.12	4.29
Columbia	4.35	3.07	5.05	8.29	9.64	10.12
Louisville	5.83	3.27	3.86	11.11	10.27	7.74
Jackson	2.52	.67	1.75	4.80	2.09	3.51
Agri-bank	13.52	8.30	9.96	25.76	26.02	19.95
Omaha	6.82	5.51	6.89	12.99	17.26	13.80
Wichita	2.87	1.05	3.58	5.47	3.28	7.17
Texas	2.80	2.31	3.42	5.33	7.23	6.84
Western	8.69	3.89	7.92	16.56	12.19	15.86
Spokane	3.11	1.42	3.64	5.92	4.45	7.29
U.S.	52.49	31.90	49.93	100.00	100.00	100.00

Table A-4--Distribution of total farm debt, by lender, by FCS district, 1980, 1985, and 1990

FCS district	Farmers Home Admin.	Individuals and others	Commercial banks	Farm Credit System	Life insurance cos.	Total share of farm debt 1/
Percent						
Springfield						
1980	18.3	29.5	22.1	28.6	1.0	100.0
1985	21.4	23.5	21.2	32.8	.9	100.0
1990	17.4	19.6	21.2	41.0	.8	100.0
Baltimore						
1980	11.8	31.4	21.0	32.6	1.7	100.0
1985	13.9	26.3	20.6	37.5	1.5	100.0
1990	10.2	19.9	24.2	42.5	3.2	100.0
Columbia						
1980	16.5	21.9	11.0	43.7	6.6	100.0
1985	20.2	15.1	13.6	43.8	7.1	100.0
1990	14.8	17.2	26.0	30.8	11.2	100.0
Louisville						
1980	8.2	24.6	22.0	38.3	5.8	100.0
1985	15.2	23.7	26.0	29.5	5.3	100.0
1990	13.5	21.1	36.1	24.9	4.5	100.0
Jackson						
1980	21.6	17.6	17.7	32.8	9.0	100.0
1985	30.2	12.2	17.8	32.5	6.4	100.0
1990	28.5	15.1	27.0	20.8	8.6	100.0
Agri-bank						
1980	9.8	26.6	24.2	31.8	5.8	100.0
1985	14.0	22.8	25.6	32.5	4.6	100.0
1990	13.1	20.0	38.2	24.7	4.0	100.0
Omaha						
1980	8.9	29.7	27.4	24.8	6.9	100.0
1985	11.8	30.4	28.9	22.1	6.4	100.0
1990	10.9	24.1	43.6	16.1	5.2	100.0
Wichita						
1980	9.0	24.8	27.1	30.9	6.9	100.0
1985	11.7	18.3	31.5	32.2	5.4	100.0
1990	10.5	20.5	40.7	23.5	4.7	100.0
Texas						
1980	10.2	29.7	25.8	24.1	8.8	100.0
1985	11.9	21.5	30.5	27.8	6.8	100.0
1990	11.7	20.0	34.6	28.1	5.7	100.0
Western						
1980	6.1	28.9	23.3	28.6	12.7	100.0
1985	6.7	21.9	24.1	35.2	11.8	100.0
1990	6.6	18.1	28.9	29.2	17.3	100.0
Spokane						
1980	10.6	33.5	14.5	30.6	10.1	100.0
1985	11.5	28.5	20.5	30.2	9.3	100.0
1990	12.2	22.3	30.0	23.8	11.0	100.0
U.S.						
1980	10.5	27.1	22.6	31.3	7.2	100.0
1985	13.8	23.0	25.0	31.3	6.3	100.0
1990	12.4	20.3	34.7	25.5	7.0	100.0

1/ Total share of debt includes CCC storage and drying facilities loans.

The Health Insurance Status of Farm Operators, Managers, and Workers, and the President's Health Care Reforms

by Michael Compson¹

Abstract: Nearly 30 percent of U.S. farm operators, managers, and workers had no health insurance coverage in 1989. Forty-three percent of all farm workers were uninsured, compared with 13 percent of farm operators and managers. The large disparity is primarily attributed to the lack of employer-provided health insurance, the current incentives in the Federal tax code, and the income of farm workers. The Administration has proposed comprehensive reforms for the health insurance industry. These reforms could reduce the number of uninsured farm operators, managers, and workers.

Keywords: Employer-provided health insurance, health insurance networks

A National Health Interview Survey (NHIS) conducted by the National Center For Health Statistics found approximately 29 percent of the 3.2 million farm operators, managers, and workers were without health insurance in 1989, nearly twice the national average. The survey also revealed significant differences in health insurance coverage between farm operators and managers relative to farm workers.

The Health Insurance Status of Farmers

In 1989, 43 percent of farm workers were uninsured, compared with 13 percent of the farm operators and managers (table B-1). Workers were three times more likely not to have private health insurance than operators and managers. Smaller differences exist in Medicare coverage.

Several reasons explain why so many farmers and their workers are uninsured: the lack of employer-provided insurance; incentives in the current Federal tax code affecting health insurance and care; income; work safety; rural undercoverage; and migratory workers.

¹ Economist with the Agriculture and Rural Economy Division, Economic Research Service, USDA.

Lack of Employer-Sponsored Health Insurance

The 1989 NHIS reported that 38 percent of all farm workers received employer-provided health insurance, well below the 66 percent of all workers in the United States. However, 52 percent of these farm workers were covered under their spouse's or another family member's plan. Thus, only 19 percent of the farm workers were covered by their employer. The lack of employer-provided health insurance is primarily the result of the small number of employees working on farms. The 1989 USDA Farm Costs and Returns Survey found that 99 percent of all U.S. farms reported that the peak number of employees at any point that year, including paid family members, was fewer than 25.

An estimated 51 percent of the uninsured individuals in the United States worked for firms with fewer than 25 employees.² The primary reason for the large percentage of uninsured individuals working for small firms is the inability of those firms to spread risks and overhead over a large number of employees and hence, provide their employees with health insurance. For example, a 1991 Congressional Budget Office study estimated that the administrative costs for firms with under 10 employees averaged about 35 percent of premiums, compared with 12 percent for firms with more than 500 employ-

ees. Eighty-six percent of the employers who did not provide insurance for their employees, cited cost as a reason.

Federal Tax Incentives

Federal tax law exempts the entire amount of an employer's contribution towards an employee's health insurance from Federal, State, and local income taxes and Federal payroll taxes. Individuals covered by such plans have substantial health insurance subsidies relative to others who must purchase their own private insurance.

The subsidy for individuals in the 15-percent Federal income tax bracket with income below the Social Security cap ranges from 30.3 to 40.3 cents per dollar of employer-provided health insurance, depending on the State of residence.³ The subsidy includes 15.3 percent for the Federal payroll tax, assuming that the individual bears the full burden of the tax, and from 0 to 10 percent for State income tax rates. For individuals in the 28-percent Federal marginal income tax bracket with income below the Social Security cap, the subsidy ranges from 43.3 to 53.3 cents per dollar of employer-provided health insurance. Individuals subject to the 31-percent Federal tax rate would, for the most part, have incomes above the Social Security cap but would be subject to the

² Burman and Rodgers (1992).

³ The amount of wages and salaries subject to the Social Security payroll tax is capped at \$55,400 per individual in 1992.

Table B-1--The 1989 health insurance status of farmers

	Farm operators and managers		Farm workers and other agricultural workers		All agricultural workers	
	Number reporting	% of category	Number reporting	% of category	Number reporting	% of category
All categories of insurance coverage:						
Covered	1,235,670	84	933,509	54	2,169,179	68
Not covered	183,236	13	739,192	43	922,428	29
Unknown	47,797	3	57,768	3	105,565	3
Total	1,466,703	100	1,730,469	100	3,197,172	100
Private health insurance:						
Covered	1,181,291	81	841,709	49	2,023,000	63
Not covered	235,714	16	838,519	49	1,074,233	34
Unknown	49,698	3	50,241	3	99,939	3
Medicare insurance:						
Covered	229,390	16	103,767	6	333,157	10
Not covered	1,194,134	81	1,587,502	92	2,781,636	87
Unknown	43,179	3	39,200	2	82,379	3
Other public assistance: 1/						
Covered	35,469	2	67,425	4	102,894	3
Not covered	1,373,841	94	1,599,268	92	2,973,109	93
Unknown	57,393	4	63,776	4	121,169	4

1/ Other public assistance health insurance coverage includes: Medicaid, military health benefits, CHAMPUS, any other programs for military and other public assistance programs.

Source: 1989 National Health Insurance Survey, Health Insurance Supplement.

2.9-percent Medicare Health Insurance tax up to \$130,200. Individuals above both caps would receive a subsidy ranging from 31 to 41 cents per dollar of employer-provided health insurance.

Since 1987, self-employed individuals, including farm sole proprietors, have been able to deduct 25 percent of health insurance premiums from their Federal income tax. The deduction is limited to individuals without access to employer-provided health insurance through a spouse and cannot exceed self-employment income. Although the deduction reduces the cost of health insurance, many are still at a disadvantage relative to those covered under employer-sponsored health insurance. According to the 1989 National Health Interview Study, 46 percent of the farm operators and managers covered under employer-sponsored health insurance were covered under their spouse's or

other family member's plan, compared with 38 percent of the farm workers. Subsidies are also provided to persons with medical expenses in excess of 7.5 percent of adjusted gross income.⁴

Family Income

Income is a significant factor in determining whether an individual has health insurance. In 1989, 49 percent of the individuals with family income below the poverty level were uninsured. Approximately 32 percent of the individuals with family income between the poverty level and twice the poverty level were uninsured. Of those individuals with family income three times greater than the poverty level, 6 percent were uninsured.⁵

While the NHIS provides details on health insurance status, information regarding the level of income is limited for several reasons. First, 29 percent of the farm operators and managers and 24 percent of the farm workers did not respond to questions concerning income. Second, the highest response for family income is \$50,000 and above, limiting information about higher income individuals. The distribution of family income indicates that 32 percent of the farm workers reported family income less than \$15,000, compared with

15 percent of farm operators and managers. This large difference suggests that a greater portion of farm workers are unable to purchase private insurance, explaining part of the disparity in private insurance coverage. Almost half of the uninsured farm workers reported family income below \$15,000. These same farm workers constitute 36 percent of all of the uninsured farm operators, managers, and workers.

The Administration's Proposal

The Administration has proposed reforms to address two fundamental problems in the health care insurance industry: cost and access. Three major aspects of the reform package directly related to the insurance gap among farmers and their employees are: 1) the tax credit or deduction for lower and middle income individuals to purchase health insurance, 2) the increase in the self-employment insurance deduction to 100 percent and, 3) the development of health insurance networks (HIN) to provide lower premiums for small businesses.

Tax Credit and Deduction for Health Insurance

The Administration's insurance reform includes a proposed tax credit voucher

⁴ Other Federal tax provisions affecting health care are the supplemental earned income tax credit for certain low income taxpayers who contribute toward the purchase of health insurance for their children, the tax exemption for certain insurance groups and non-profit hospitals, and the ability to pay health costs out of pre-tax income through so-called cafeteria or flexible-benefit plans.

⁵ Burman and Rodgers (1992).

that is transferable to employers or insurance companies to purchase health insurance. Eligibility depends on current health care coverage and income. Individuals covered by Medicare, Medicaid, or any other Federal program would not be eligible for the tax credit or the deduction. Individuals at or below the poverty level would be eligible for the maximum credit that is determined by family status. The amount of the credit or deduction for those above the poverty level is determined by both family status and modified adjusted gross income.

The proposal distinguishes among three categories of family status: single (a person with no children); two-person families (married couples and other two-person families); and families (any family with three or more individuals). Modified adjusted gross income equals adjusted gross income plus nontaxable Social Security payments, railroad retirement payments, and tax-exempt interest income.

For those who qualify, the maximum amount of the tax credit would be \$3,750 for families, \$2,500 for two-person families, and \$1,250 for single individuals. Those with income above the poverty level would receive a partial tax credit that would decrease to 10 percent of the maximum credit they are eligible for, once their income reached 150 percent of the poverty level. Individuals with income greater than 150 percent of poverty would receive the greater of the tax credit or the deduction. At some point above this level, the benefits of the deduction would be greater than the benefits of the credit. Eligibility for the credit and the deduction is eliminated at \$80,000 for families, \$65,000 for two-person families, and \$50,000 for single individuals.

Individuals currently covered under an employer-sponsored program may be eligible for the credit or deduction depending on the contribution made by their employer. The credit or deduction would be decreased by the amount contributed by their employer. For example, an individual eligible to receive a \$2,000 credit whose employer contributed \$1,500 towards his/her health insurance, would receive a credit for \$500. If this individual's employer contributed more than \$2,000, the indi-

vidual would not receive the credit since the employer's contribution is greater than the eligible credit.

The tax credit would replace the supplemental earned income tax credit currently available to certain low income taxpayers who contribute toward the purchase of health insurance for their children.

Self-Employed Individuals

To address the cost disadvantage faced by self-employed individuals, the Administration's proposal expands the self-employment health insurance deduction to 100 percent of the premiums. The current limitation that the deduction not exceed self-employed earnings would still apply. Self-employed individuals could take the 100-percent deduction or the applicable credit, whichever yields the greatest benefits.

This provision could provide significant tax subsidies toward health insurance for self-employed farmers. Using the current deduction, a farm family with \$35,000 in net farm income and a \$6,000 insurance premium saves about \$420 in Federal income taxes. Under the Administration's proposal, this family could deduct the full \$6,000, reducing the family's after-tax health insurance costs by an additional \$1,260 or about 21 percent.

Health Insurance Networks

The Administration's proposal would allow the development of national health insurance networks (HIN) to improve affordability for small employers by spreading risk and administrative costs over a larger number of individuals. This would allow small businesses and individuals (farmers) to obtain the same health coverage and rates available to large businesses and groups. Given the lack of employer-provided health insurance for farm workers, HIN's could reduce the number of uninsured farm workers.

Summary

Compared with a national average of around 15 percent, nearly 30 percent of all farm operators, managers, and workers were uninsured in 1989. While only 13 percent of farm operators and managers were uninsured, 43 percent of un-

Data and Units of Analysis

The National Health Interview Survey (NHIS) has been conducted by the National Center for Health Statistics since 1957. The "core" survey asks the respondents about their health. Each year the core survey is supplemented with questions concerning specific health issues. The 1989 health insurance coverage supplemental interview evaluated the health insurance coverage of farmers. The survey data distinguish between farm operators and managers and farm workers, allowing a comparison between the two groups. Primary occupations covered were farm operators, managers, or workers according to the Standard Occupational Code. For respondents with more than one job, occupations were ranked by the most hours, the job held longest, and then by what they considered as their main job.

insured farm workers were uninsured. The underlying reasons for the large disparity are the lack of employer-provided health insurance, the current incentives in the Federal tax code, and the low income earned by farm workers.

The health insurance problems faced by farmers and their employees are not isolated to the agricultural industry, which explains why reforming health care is a priority. The Administration has proposed a comprehensive reform of the current health insurance system to address the problems of cost and access. This analysis suggests that reform would help farmers and their employees obtain health insurance coverage.

Low-income farmers or farm workers not covered by Medicare, Medicaid, or any other Federal health insurance program or by an employer-sponsored health insurance program would be eligible for a transferable tax credit certificate. Self-employed farmers could deduct the full amount of their private health insurance premium or use the credit or deduction, whichever yields the greatest benefits. Finally, farm operators and managers could offer their employees health insurance because of the lower costs associated with HIN.

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How Young Farmers Accumulate Farmland

by Fred Gale¹

Abstract: Patterns of owned and rented farmland by age of operator and region are examined using Census of Agriculture data. Young farmers generally rent more acres than they own, and acquire more acreage through purchase and rental as they gain experience. Family transfers are a major source of ownership for young farmers, but more than half of the land they owned was purchased from a nonrelative.

Keywords: Farmland, ownership, rental, tenancy, life cycle, beginning farmers

The number of young people in farming declined during the 1980's, raising concerns about difficulties faced by young people beginning farming careers. The common perception is that high start-up costs of a modern farm operation, due to increasing farm size and expensive land, preclude entry by young men and women unless they can acquire land from relatives as a gift or inheritance.

This perception is based on the assumptions that a farmer must purchase the land he or she farms, and that all farms are the same size. While the ideal in American agriculture has always been to own land, in fact, most full-time farmers rent a large share of the land that they operate (4). This is particularly true of young farmers, who also tend to operate smaller farms than the average, and accumulate land over many years.

New young farmers rent most of the land they operate. The amount of land operated and the mix of rented and owned land differs across age groups. As they gain experience and improve their financial position, farmers acquire additional land through rental and purchase. Farmers in every age group rented significantly more acreage in 1987 than farmers of the same age in 1978.

Young Farmers Rent More Acres Than They Own

Young people who want to begin farming typically have limited financial re-

sources, and lenders may not be inclined to take a chance on them. According to the 1987 Census of Agriculture, the average farmer whose principal occupation is farming has 670 acres. At \$685 per acre (the 1992 average), a new farmer would have to come up with about \$460,000 to start farming.

Of course, this overstates the capital requirement, since young farmers operate smaller than average farms and rent much of their land. In 1987, the average farmer under 25 years old owned 95 acres, and rented 264 acres, a ratio of 2.8 rented acres for every one owned (table C-1).² The average 25-34 year-old farmer owned 197 acres and rented 390, a rent-own ratio of 2. Nearly 60 percent of under-25 farmers and more than one-third of those 25-34 rented all the land they farmed in 1987.

The number of acres owned and rented varies quite a bit by region. Young farmers in the Midwest own fewer acres than their peers in other regions. For example, Midwestern farmers under 25 owned an average of 54 acres, compared with 118 in the Plains, and 370 in the Mountain region. The average for Midwestern 25-34 year olds was 105 acres, comparable to the 100 acres owned by Northeastern farmers, but less than half the acres owned by counterparts in the Plains, Mountain, and Pacific regions.

2/ Averages were computed for all farmers. Note that more than half of under-25 year-old farmers, and 40 percent of 25-34 year-olds own no farmland. The average owned acres for those who did own land in 1987 was 212 acres for under-25, and 305 acres for 25-34 year-olds.

Young farmers in every region rent more land than they own, but the reliance on rented land varies. In 1987, Midwestern and Plains farmers were the most reliant, renting 2.5 to 3.5 times as much land as they owned (table C-1). Young farmers in the Northeast were the least reliant, but still rented slightly more acres than they owned. In each region, those in the 25-34 group had more acres rented and owned than farmers under 25, but the ratio of rented to owned land was lower for the older group.

Farmland Accumulation

As capital becomes available through retained earnings and borrowing from commercial lenders, the young farmer purchases land to expand the farm, but still relies on rental to reach the optimum size. As the farmer becomes established, more capital is available for land purchases, and dependence on rented land diminishes. In later years, preceding retirement, the farmer often scales back by renting fewer acres.

Differences in acreages across age groups result from the systematic accumulation of land by farmers over their lifetimes, and from differences in initial farm size between farmers who entered farming during different eras. Consider a hypothetical example. Suppose we find that today 25 year-olds own 100 acres, on average, and 35 year-olds own 150 acres. In 10 years can we expect today's 25 year-olds to own 150 acres? Not necessarily, because part of the difference between age groups may be due to differences in initial starting size.

¹ Agricultural economist, Economic Research Service, USDA.

To investigate long-term patterns of land accumulation, owned and rented acres of farmland were tracked between the 1978 and 1987 Censuses of Agriculture for various age groups. For example, we can look at how a cohort of farmers who were 25-34 years old in 1978 changed their acreage over 9 years by comparing the number of owned acres of 25-34 year-olds in 1978 with the number of owned acres of 35-44 year-olds in 1987. (The 25-34 group of 1978 would have been 34-43 in 1987). Ideally, we would like to have a 10-year spacing between the Censuses to do this analysis so that, for example, the 1978 25-34 year-olds would be the 35-44 year-olds of 1988, but the 9-year spacing gives a close approximation.

In figure C-1 the average owned acres for each age group in 1978 and 1987 is plotted against age, with a line drawn to connect the two points representing observations of a cohort. The data are for farmers whose principal occupation is farming. For example, farmers less than 25 in 1978 owned an average of 84 acres, compared with 197 for farmers age 25-34 9 years later, in 1987.³

Average owned acres grew steadily from the under-25 age group (about 90 acres) to 45-54 (422 acres in 1978, 487 in 1987). The older cohorts maintained nearly constant owned acreage per farm between 1978 and 1987. The implication is that farmers tend to expand owned acreage at a steady pace until about age 50, when owned acres level off. Farmers under 55 years old show little difference between cohorts. But for the oldest farmers, older cohorts had smaller farms than their younger counterparts. For example, those who were 45-54 in 1978 owned 386 acres per farm—75 less than the 461 owned by their younger counterparts who were 45-54 in 1987.

A similar difference is shown for 55-64 year-olds, but the younger ages show no difference between cohorts. This may reflect the rapid changes in farm size that occurred during the 1950's and 1960's when today's older farmers were

Table C-1--Owned and rented land per farm of young farmers varied by age group and region in 1987 1/

Age group: Region 2/	Under 25			25-34		
	Owned	Rented	Ratio 3/	Owned	Rented	Ratio 3/
	Acres	Percent		Acres	Percent	
Northeast	73	87	1.2	100	103	1.0
South	86	185	2.2	130	235	1.8
Midwest	54	177	3.4	105	249	2.9
Plains	118	419	3.6	292	666	2.4
Mountain	370	591	1.6	781	981	1.3
Pacific	150	354	2.4	212	435	2.1
United States	95	264	2.8	197	390	2.0

1/ Data are for farmers with principal occupation farming.
2/ Regions defined as follows. Northeast: ME, NH, VT, MA, CT, NY, PA, MD, DE. South: WV, VA, KY, TN, NC, SC, GA, FL, AL, MS, LA, AR. Midwest: OH, IN, IL, MO, IA, MI, MN, WI. Plains: ND, SD, NE, KS, OK, TX. Mountain: MT, ID, WY, CO, UT, NV, NM, AZ. Pacific: CA, OR, WA.
3/ Ratio of rented to owned acres.
Source: (6).

Table C-2--Source of land ownership for young farmers, 1979 and 1988

How land was acquired	Year	Age of farm operator	
		Under 25	25 to 34
		1,000 acres (% of owned acres) 1/	
Purchased from nonrelative	1979	2,889 (62)	19,585 (54)
	1988	640 (30)	12,313 (56)
Purchased from relative	1979	783 (16)	10,379 (29)
	1988	806 (37)	6,258 (28)
Inherited	1979	958 (20)	5,149 (14)
	1988	466 (22)	3,271 (15)
Rented acres	1979	10,565	55,745
	1988	6,667	56,035

1/ Percent of acres owned by the relevant age group. Does not sum to 100 percent because all sources of ownership are not shown in the table.
Sources: (7,8).

beginning their careers. Average farm sizes were growing rapidly at that time, so a farmer may have entered with more acres than an older neighbor who began 10 years earlier in 1947 (Brake and Wirth show growth in farm sizes and larger farms for younger cohorts over that period (2)).

Rented acres show a concave, or inverted-U, pattern over the farmer's lifetime, and substantial differences between cohorts are apparent (figure C-2). As with owned acres, young farmers increased rented acres rapidly between 1978 and 1987. Under-25 farmers rented an average of 207 acres in 1978, compared with 390 for 25-34 year-olds in 1987, an increase of 183. The increase in rented acreage diminishes with each successive age group until rented acreage decreases for older farmers. Significant declines in rented acreage occurred between 1978 and 1987

for the 45-54 and 55-64 year-olds of 1978. Clearly renting is an important strategy used by young farmers to expand their farms, but as farmers mature they decrease their dependence on rentals.

The increasing reliance on renting is apparent from differences between cohorts. For each age group the more recent cohort has a larger number of rented acres. For example, farmers who were 25-34 years old in 1978 rented an average of 324 acres, while farmers who were that age in 1987 rented an average of 390.

In both 1978 and 1987, nearly 60 percent of farmers under 25 were tenants. The percentage falls as the farmers grow older, to 35 percent at ages 25-34, 16 percent at ages 35-44, and 10 percent at more advanced ages (figure C-3). Many young people enter farming as

³ The group of farmers who were 25-34 in 1987 includes those who were less than 25 in 1978 plus 25 year-olds from 1978, less those who exited between 1978 and 1987, plus new entrants.

tenants, but most quickly make the transition to part-ownership.

Most Owned Land Purchased From Nonrelatives

Most young farmers are able to acquire ownership of farmland without help from family members, but between 1979 and 1988 the youngest farmers (under 25 years old) became more reliant on inheritance and family purchases of farmland.

In 1979, farmers under 25 years old had acquired 62 percent of the land they owned from nonrelatives, and 36 percent through inheritance or purchase. Farmers 25-34 had obtained 54 percent from nonrelatives (table C-2). Under-25 farmers had inherited slightly more acres (958,000) than they had purchased from relatives (783,000), but most (2,889,000 acres) were purchased from non-relatives. Farmers ages 25-34 purchased twice as much from relatives (10,379,000 acres) as they inherited (5,149,000), but they also acquired most of their owned land from nonrelatives (19,585,000 acres). Generally, less than one-fifth of young landowners operated any inherited farmland, and about one-third had purchased from a relative.

By 1988, the number of young farmers had decreased drastically, so much less land was owned by young farmers. Under-25 farmers had become much more dependent on acquisitions from relatives, while the dependence of 25-34 year-olds on family transfers remained fairly stable. Under-25 farmers in 1988 had obtained 59 percent of their owned land through inheritance or family purchases, up from 36 percent in 1979, while purchases from nonrelatives fell from 62 percent to 29 percent of owned land.

The most noticeable shift was a dramatic drop in purchases from nonrelatives combined with an increase in purchases from relatives. The percentage of under-25 farmers who had purchased land from nonrelatives fell from two-thirds to less than half, and the percentage who had purchased from family members rose from 28 to 55 percent. In 1979, under-25 farmers had purchased more than three times as much from relatives as from nonrelatives, but

in 1988 purchases from relatives exceeded purchases from nonrelatives. The share of under-25 farmers' owned acres that were inherited increased slightly.

The number of acres owned by 25-34 year-olds fell with the number of operators, leaving the shares acquired from various sources nearly unchanged. Increased dependence on rented acres is highlighted again in table C-2 by the slight increase in rented acres contrasted with the decline in owned acres in each category. Renting remains the primary strategy for acquiring farmland—the number of rented acres dwarfs the number of owned acres from any source.

Prospects for Capital Gains Encourage Ownership

The clear trends are toward greater dependence on renting, and fewer open-market purchases of land by the youngest farmers. The data seem to support claims of farm advocacy groups that acquisition of farmland and entry to farming are becoming increasingly difficult for young men and women, due to escalating start-up costs and difficulty in obtaining credit. However, these trends could also be attributed to the response of young farmers to changes in the economic environment of farming.

Purchasing farmland was a strategy that made sense during the inflationary 1970's, while renting made sense in the 1980's, when land values plummeted. In constant dollars, value of land and buildings per acre grew 70 to 100 percent or more in most States during the 1970's. But the gains were erased in the early 1980's as land values fell below those recorded in 1970. The prospect of capital gains provided strong incentive for farmers to own farmland during the 1970's, while the prospect of falling land values and capital losses in the 1980's made renting attractive.

In this light, the observation that young farmers owned more farmland in the 1970's and acquired more through purchases from relatives makes perfect sense. In the 1980's, many potential farmers turned away from farming as a career. Those who did enter farming were those more committed to a farm-

ing career, and these are the people who often acquire farmland from family members. The number of farm operators under 25 with inherited land or land acquired from a relative remained fairly constant between 1979 and 1988, while the number who had purchased land from nonrelatives fell substantially.

Do rising land prices prevent young people from entering farming? By comparing land ownership rates between States in a given year, an inverse relationship can be found between the average number of owned acres per farm and the average value of land and buildings per acre. That is, young farmers own more land in States where land is cheaper.

Evidence does not indicate that more expensive land is reducing ownership. First of all, after accounting for inflation, long-term increases in land prices have been surprisingly modest. Land prices in urbanized States of the major U.S. farming regions have grown modestly over time, except in those places with few competing nonfarm uses for farmland in which land values have no long-term trend (3).⁴ The average value of land and buildings per acre rose by 246 percent between 1970 and 1990, but in constant dollars the increase was less than 3 percent. In Illinois, representative of major farm States, the real value of land per acre fell 16 percent between 1970 and 1990.

Secondly, rising land prices probably have their most important effect by encouraging land ownership with the prospect of capital gains. Recent experience shows positive correlation between farmland ownership and land prices. During the late 1970's when land ownership rates were higher, and more farmers were entering than in the 1980's, land prices were also higher.

Conclusion

Young farmers rely heavily on renting to acquire farmland. The degree of reliance and the number of acres owned varies widely between regions, with

4 There were large gains in real land values during the 1970's, but they were wiped out in the 1980's. Note that farmers are taxed on nominal gains when they sell their land.

Midwestern and Plains farmers being the most reliant, and Northeastern farmers being the least reliant on rented land. Many farmers enter farming without owning any farmland. Acquisition of farmland from family members is an important source of ownership for young farmers, but most land owned by young farmers is purchased from non-relatives.

The capital outlay needed to enter farming is substantial, but the amount can be overestimated if analysts fail to recognize that young farmers generally farm less land than more experienced farmers and that they rent most of the land they farm. The availability of rent-

al as a means for acquiring farmland allows young entrepreneurs to begin farming with a modest amount of capital and debt.

The popular myth is that young people are excluded from entering farming unless they inherit, or "marry into" a farm. In fact, rental is the primary means by which young farmers acquire farmland.

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Figure C-1
Farmers increase owned acreage during the early years of their careers

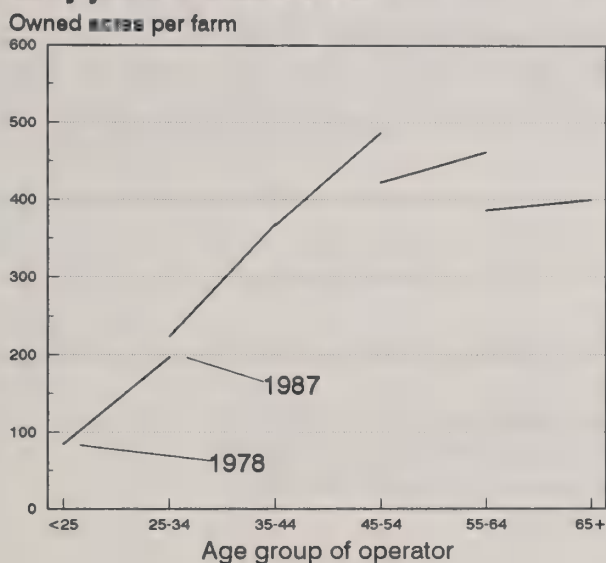


Figure C-2
Farmers increase rented acres early in their careers and decrease rented acres preceding retirement

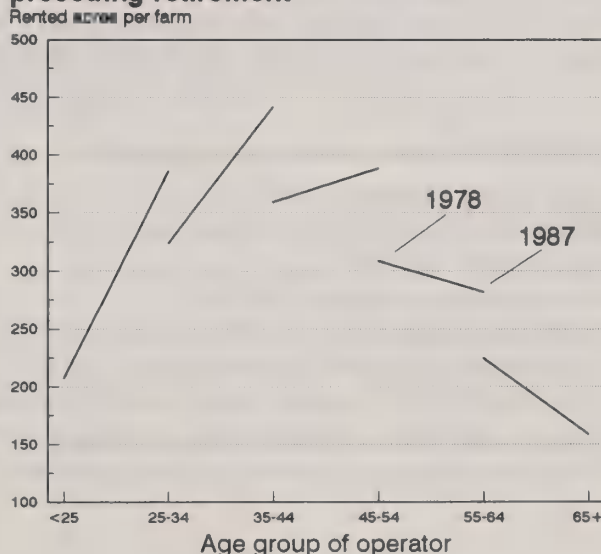
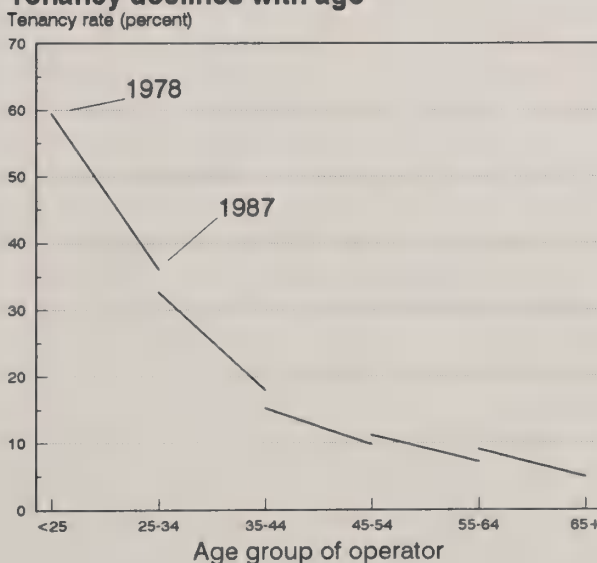


Figure C-3
Tenancy declines with age



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Appendix table 1--Farm income statements, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Cash income statement						
1. Cash receipts	141.8	151.1	161.0	169.9	167	164 to 168
Crops 1/	65.9	71.7	76.9	80.0	80	80 to 83
Livestock	76.0	79.4	84.1	89.9	87	84 to 85
2. Direct Government payments	16.7	14.5	10.9	9.3	8	9 to 10
Cash Government payments	6.6	7.1	9.1	8.4	8	9 to 10
Value of PIK commodities	10.1	7.4	1.7	.9		0 to 1
3. Farm-related income 2/	6.6	7.1	8.2	7.2	8	6 to 8
4. Gross cash income (1+2+3)	165.2	172.7	180.2	186.4	183	180 to 185
5. Cash expenses 3/,4/	109.4	114.6	121.2	125.2	125	125 to 129
6. NET CASH INCOME (4-5)	55.8	58.1	58.9	61.3	58	54 to 57
Deflated (1987\$) 5/	55.6	55.9	54.2	54.2	49	44 to 48
Farm income statement						
7. Gross cash income (1+2+3)	165.2	172.7	180.2	186.4	183	180 to 185
8. Nonmoney income 6/	5.6	6.1	6.2	6.1	6	6 to 7
9. Inventory adjustment	-2.3	-3.4	4.8	3.5	*	1 to 5
10. Total gross income (7+8+9)	168.5	175.4	191.1	196.0	189	189 to 195
11. Total expenses	128.8	134.3	141.2	145.1	145	145 to 149
12. NET FARM INCOME (10-11)	39.7	41.1	49.9	51.0	45	42 to 47
Deflated (1987\$) 5/	39.7	39.5	46.0	45.0	38	34 to 40

P = preliminary; F = forecast. * = less than \$500 million.

1/ Includes CCC loans. 2/ Income from custom work, machine hire, recreational activities, forest product sales, and other farm sources. 3/ Excludes depreciation and perquisites to hired labor. 4/ Excludes farm households. 5/ Deflated by the GDP implicit price deflator. 6/ Value of home consumption of farm products and imputed rental value of operator dwelling.

Totals may not add due to rounding.

Appendix table 2--Relationship of net cash to net farm income 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Gross cash income	165.0	172.6	180.0	186.5	183	180 to 185
Minus cash expenses	109.4	114.6	121.2	125.2	125	125 to 129
Equals net cash income	55.6	58.0	58.8	61.3	58	54 to 57
Plus nonmoney income						
Gross rental value of dwelling	5.6	6.1	6.2	6.1	6	6 to 7
Value of inventory change	-2.3	-3.4	4.8	3.5	1	1 to 5
Minus noncash expenses						
Labor perquisites	.5	.5	.5	.5	1	0 to 1
Capital cons. exc. dwellings	15.6	15.8	16.3	16.0	16	15 to 17
Minus dwelling expenses						
Capital consumption	1.5	1.5	1.5	1.5	2	1 to 2
Interest	.5	.5	.5	.5	1	0 to 1
Taxes	.5	.5	.6	.6	1	0 to 1
Repair & maintenance	.6	.6	.5	.6	1	0 to 1
Insurance	.2	.2	.2	.2	■	0 to 1
Equals net farm income	39.6	41.1	49.8	51.0	45	42 to 47

P = preliminary; F = forecast. ■ = less than \$500 million.

Appendix table 3--Cash receipts, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Crop receipts: 1/						
Food grains	5.8	7.5	8.2	7.9	7	7 to 10
Wheat	5.0	6.4	7.3	6.8	6	6 to ■
Rice	.7	1.1	.9	1.1	1	1 to 2
Feed grains and hay	14.6	14.3	17.1	19.1	19	17 to 19
Corn	9.9	8.9	11.4	13.7	14	12 to 14
Sorghum, barley, and oats	2.1	2.2	2.3	2.0	2	1 to 3
Oil crops	11.3	13.5	11.9	12.4	13	11 to 13
Soybeans	10.0	12.1	10.5	10.9	11	10 to 12
Peanuts	1.0	1.1	1.1	1.3	1	1 to 2
Cotton lint and seed	4.2	4.5	5.0	5.2	6	4 to 6
Tobacco	1.8	2.1	2.4	2.7	3	2 to 4
Fruits and nuts	8.1	9.2	9.3	9.3	10	9 to 11
Vegetables	9.9	9.8	11.5	11.5	11	10 to 12
Greenhouse & nursery	6.8	7.1	7.6	8.1	8	■ to 9
TOTAL CROPS	65.8	71.6	76.8	80.4	81	80 to 83
Livestock receipts:						
Red meats	44.5	46.5	46.9	51.7	51	45 to 50
Cattle and calves	33.6	36.8	36.9	39.7	40	35 to 40
Hogs	10.3	9.2	9.5	11.5	11	9 to 11
Sheep and lambs	.6	.5	.5	.4	4	0 to 1
Poultry and eggs	11.5	12.9	15.4	15.3	15	13 to 15
Broilers	6.2	7.4	8.8	8.4	8	8 to 10
Turkeys	1.7	2.0	2.2	2.4	2	2 to 3
Eggs	3.2	3.1	3.9	4.0	4	2 to 4
Other poultry	.4	.4	.5	.5		0 to 1
All dairy products	17.7	17.6	19.4	20.2	18	18 to 22
Other livestock	2.3	2.4	2.5	2.5	3	2 to 3
TOTAL LIVESTOCK	76.0	79.4	84.1	89.6	87	84 to 85
TOTAL RECEIPTS	141.8	151.1	160.9	170.0	167	164 to 168

P = preliminary; F = forecast. ■ = less than \$500 million. Totals may not add due to rounding. 1/ Includes sugar, seed, and other miscellaneous crops.

Appendix table 4--Farm production expenses, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Farm-origin inputs	32.6	36.5	37.7	39.1	38	36 to 40
Feed	17.5	20.4	21.0	20.7	20	19 to 21
Feeder livestock	11.8	12.8	13.1	14.8	14	13 to 15
Seed	3.3	3.4	3.6	3.6	4	3 to 5
Manufactured inputs	18.1	18.9	20.0	21.1	22	21 to 25
Fertilizer	6.5	6.9	7.2	7.1	7	7 to 9
Fuels and oils	5.0	4.9	4.8	5.7	6	5 to 6
Electricity	2.2	2.3	2.5	2.5	3	2 to 3
Pesticides	4.5	4.6	5.4	5.7	6	6 to 7
Total interest charges	15.0	14.7	14.7	14.5	14	13 to 15
Short-term interest	6.8	6.8	6.9	6.9	7	5 to 7
Real estate interest	8.2	7.9	7.8	7.6	7	6 to 8
Other operating expenses	34.2	34.4	37.9	39.0	40	39 to 45
Repair and maintenance	6.8	6.9	7.3	7.3	7	7 to 8
Labor expenses	10.0	10.4	11.1	12.5	13	11 to 15
Machine hire & custom work	2.1	2.4	2.7	2.6	3	2 to 3
Animal health	1.3	1.3	1.5	1.5	1	1 to 2
Marketing, storage & transportation	4.1	3.5	4.1	4.0	5	4 to 5
Miscellaneous operating expenses	9.5	10.0	11.0	10.9	11	10 to 13
Other overhead expenses	28.9	29.4	30.9	31.3	31	29 to 33
Capital consumption	17.1	17.3	17.8	17.5	17	17 to 18
Taxes	4.9	4.8	5.1	5.6	6	5 to 7
Net rent to non-operator landlords	7.1	7.3	8.2	8.3	8	7 to 8
Total production expenses	128.8	134.3	141.2	145.1	145	145 to 149
Noncash expenses	16.1	16.3	16.7	16.5	16	16 to 18
Labor perquisites	.5	.5	.5	.5	1	0 to 1
Capital consumption excluding dwellings	15.6	15.8	16.3	16.0	16	15 to 17
Dwelling expenses	3.3	3.4	3.3	3.4	4	3 to 4
Capital consumption	1.5	1.5	1.5	1.5	2	1 to 2
Interest	.5	.5	.5	.5	1	0 to 1
Taxes	.5	.5	.6	.6	1	0 to 1
Repair & maintenance	.6	.6	.5	.6	1	0 to 1
Insurance	.2	.2	.2	.2	*	0 to 1
Cash expenses 1/	109.4	114.6	121.2	125.2	125	125 to 129

P = preliminary; F = forecast. * = less than \$500 million.

1/ Total production expenses minus noncash and operator dwelling expenses.

Appendix table 5--Farm income distribution by enterprise type, 1990-92 1/

Item	Crops					Livestock			
	Total crops	Cash grain 2/	Cotton	Tobacco	Fruit/nut/vegetable	Total livestock	Red meat	Poultry and eggs	Dairy
Thousands									
Number of farms:									
1990	837	426	24	87	108	1,303	993	38	169
1991P	823	419	24	86	106	1,282	976	38	167
1992F	812	413	23	84	105	1,264	963	37	164
Billion dollars									
Income:									
1. Cash receipts--									
Crops									
1990	73.0	31.9	6.1	2.9	17.7	7.4	5.8	.1	1.3
1991P	73.3	31.2	6.4	3.0	18.1	7.3	5.7	.1	1.3
1992F	74	32	6	3	19	7	6	■	1
Livestock									
1990	6.1	4.7	.2	.5	.2	83.6	44.0	14.0	22.5
1991P	5.9	4.6	.2	.5	.2	80.8	43.5	13.8	20.4
1992F	6	4	*	1	■	79	41	13	22
2. Direct Government payments--									
1990	6.6	5.3	.7	.1	.2	2.7	2.0	.0	.6
1991P	5.8	4.6	.6	.1	.2	2.4	1.7	.0	.6
1992F	7	5	1	■	■	3	2	■	1
3. Gross cash income-- 3/									
1990	89.2	43.3	7.4	3.5	18.7	97.3	53.5	14.2	25.5
1991P	88.8	41.9	7.6	3.6	19.1	94.3	52.7	14.0	23.4
1992F	90	43	7	4	20	93	50	14	25
4. Cash expenses--									
1990	52.7	26.5	3.8	2.2	9.4	72.5	41.1	7.0	21.0
1991P	52.7	26.5	3.8	2.2	9.4	72.5	41.1	7.0	21.1
1992F	54	27	4	2	10	74	42	7	21
5. Net cash income									
1990	36.5	16.8	3.5	1.4	9.3	24.9	12.4	7.2	4.4
1991P	36.1	15.5	3.8	1.5	9.7	21.8	11.6	7.0	2.3
1992F	36	16	3	2	10	19	8	6	4
Deflated (1987\$)									
1990	32.2	14.9	3.1	1.2	8.2	22.0	11.0	6.3	3.9
1991P	30.6	13.1	3.2	1.3	8.2	18.5	9.9	5.9	2.0
1992F	30	13	3	1	8	16	7	5	3
Balance sheet 5/									
6. Farm assets--									
Real estate									
1990	264.3	118.8	7.9	12.1	71.3	363.2	256.2	10.9	57.7
1991P	262.6	118.0	7.8	12.1	70.8	360.8	254.5	10.9	57.3
1992F	264	119	8	12	71	363	256	11	58
Nonreal estate									
1990	88.3	52.9	4.3	3.9	10.4	130.3	86.4	2.4	33.1
1991P	87.9	52.7	4.2	3.8	10.4	129.8	86.0	2.4	32.9
1992F	88	53	4	4	10	131	87	2	33
7. Total liabilities--									
1990	62.5	36.7	3.2	2.5	8.4	74.0	43.1	3.9	22.2
1991P	63.4	37.2	3.3	2.5	8.5	75.0	43.7	3.9	22.5
1992F	64	37	3	3	9	75	44	4	23
Percent									
8. Debt-to-asset ratio--									
1990	17.7	21.4	26.8	15.5	10.3	15.0	12.6	28.9	24.4
1991P	18.1	21.8	27.3	15.8	10.5	15.3	12.8	29.5	24.9
1992F	18.1	21.8	27.2	15.8	10.5	15.3	12.8	29.5	24.9

1991 preliminary, 1992 forecast. * = less than \$500 million. Numbers may not add due to rounding.

1/ Farm types are defined as those with 50 percent or more of the total value of production accounted for by a specific commodity or commodity group. 2/ Includes farms earning at least half their receipts from sales of wheat, corn, soybeans, rice, sorghum, barley, oats, or a mix of cash grains. 3/ Equals 1 + 2 + farm related income. 4/ Equals 3 - 4. 5/ Excludes farm households.

Appendix table 6--Farm income, assets and debt, and returns, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Income and total returns:						
1. Gross farm income 1/	164	170	186	191	185	186 to 190
2. Wages and perquisites to hired labor	9	9	10	11	12	12 to 13
3. Other operating expenses, excluding interest	80	84	89	92	92	91 to 95
4. Capital consumption	16	16	16	16	16	15 to 17
5. Net income from assets and operators' labor and management (1-2-3-4) 2/	60	61	71	72	64	65 to 69
6. Income imputed to operators' labor and management	24	25	26	29	31	29 to 33
7. Residual income to assets (5-6)	36	36	45	43	34	34 to 38
8. Real capital gain to assets	21	10	-19	-26	-42	-11 to -15
9. Total return from assets (7+8)	57	46	26	17	-8	21 to 25
10. Interest paid	15	14	14	14	14	12 to 14
11. Real capital gain to debt	7	5	6	7	8	2 to 4
12. Total return to equity (9-10+11)	49	37	18	10	-16	12 to 14
13. Real capital gain to assets and debt (8+11)	28	15	-13	-20	-36	-8 to -12
14. Residual income to equity (12-13)	21	22	30	29	20	21 to 25
Balance sheet: 3/						
15. Assets	773	801	829	847	842	840 to 850
16. Debt	144	139	137	137	139	136 to 142
17. Equity (15-16)	628	662	692	710	703	705 to 715
Percent						
Rates of return and interest rates:						
18. Rate of return on assets (ROA) (7/15)	4.8	4.6	5.5	5.2	4.0	4 to 5
19. Real capital gain on assets (8/15)	2.8	1.3	-2.3	-3.1	-4.9	-1 to -2
20. Total real return on assets (18+19)	7.6	5.8	3.1	2.0	1.0	2 to 3
21. Av. interest rate paid on debt (10/16)	9.6	10.0	10.3	10.2	9.7	9 to 10
22. Real capital gains on debt (11/16)	4.6	3.7	4.4	4.7	4.2	2 to 3
23. Real cost of debt (21-22)	5.0	6.3	5.8	5.4	5.6	7 to 8
24. Rate of return on equity (ROE) ((7-10)/17)	3.5	3.4	4.5	4.2	2.8	3 to 4
25. Real capital gain on equity ((8+11)/17)	4.7	2.4	-1.9	-2.8	-5.1	-1 to -2
26. Total real return on equity (24+25)	8.2	5.7	2.6	1.4	-2.2	1 to 2
27. Net return on assets (NROA) (18-21)	-4.9	-5.4	-4.8	-5.0	-5.8	-5 to -6
28. Spread (20-23) 4/	2.5	-0.5	-2.7	-3.4	-6.5	-4 to -5

P = preliminary, F = forecast. Numbers may not add due to rounding. 1/ Excludes operator dwellings.

2/ Numbers in parentheses indicate components required to calculate a given item. 3/ Excludes operator households and CCC activity. 4/ When total real rate of return on assets exceeds total real cost of debt, debt financing is profitable.

Appendix table 7a--Balance sheet of the farming sector, excluding operator households, December 31, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Farm assets	772.6	800.9	828.9	846.5	842	840 to 850
Real estate 1/	578.9	595.5	615.5	627.5	623	620 to 630
Livestock and poultry	58.0	62.2	66.2	70.9	68	68 to 72
Machinery and motor vehicles	80.0	81.0	84.5	84.3	84	81 to 85
Crops stored 2/	17.5	23.3	23.4	22.8	24	21 to 25
Purchased inputs	3.2	3.5	2.6	2.8	3	2 to 4
Financial assets 3/	35.1	35.4	36.8	38.3	40	39 to 43
Farm debt	144.4	139.4	137.2	136.8	139	136 to 142
Real estate 4/	82.4	77.6	75.4	73.7	74	73 to 77
Nonreal estate	62.0	61.7	61.8	63.1	64	63 to 67
Total farm equity	628.2	661.6	691.8	709.8	703	705 to 715
Percent						
Selected ratios:						
Debt-to-asset	18.7	17.4	16.5	16.1	16.5	16 to 17
Debt-to-equity	23.0	21.1	19.8	19.2	19.7	19 to 20
Debt-to-net cash income	260.9	242.9	230.9	221.3	238.0	250 to 260

P = preliminary, F = forecast. 1/ Excludes value of operator dwellings and includes real estate values not included in the 1987 Census of Agriculture and other ERS real estate series. 2/ Non-CCC crops held on farm plus value above loan rate for crops held under CCC. 3/ Excludes time deposits and savings bonds. 4/ Includes CCC storage and drying facility loans.

Appendix table 7b--Balance sheet of the farming sector, including operator households, December 31, 1987-92

Item	1987	1988	1989	1990	1991P	1992F
Billion dollars						
Farm assets	911.3	951.5	985.8	1,003.6	1,004	1,005 to 1,015
Real estate 1/	658.6	682.2	703.9	711.4	706	705 to 715
Livestock and poultry	58.0	62.2	66.2	70.9	68	68 to 72
Machinery and motor vehicles	84.5	86.1	89.2	88.6	88	85 to 89
Crops stored 2/	17.5	23.3	23.4	22.8	24	21 to 25
Purchased inputs	3.2	3.5	2.6	2.8	3	2 to 4
Household goods	32.9	37.0	42.2	46.4	50	51 to 55
Financial assets	56.7	57.2	58.3	60.8	66	65 to 69
Farm debt	153.7	148.5	146.0	145.1	147	145 to 151
Real estate 3/	87.7	83.0	80.5	78.4	79	78 to 82
Nonreal estate	66.0	65.6	65.5	66.7	68	66 to 70
Total farm equity	757.6	802.9	839.8	858.5	857	860 to 870
Percent						
Selected ratios:						
Debt-to-asset	16.9	15.6	14.8	14.5	14.6	14 to 15
Debt-to-equity	20.3	18.5	17.4	16.9	17.2	16 to 18
Debt-to-net cash income	277.8	258.7	245.7	234.7	251.7	270 to 280

P = preliminary; F = forecast. 1/ Includes real estate values not included in the 1987 Census of Agriculture and other ERS real estate series. 2/ Non-CCC crops held on farm plus value above loan rate for crops held under CCC. 3/ Includes CCC storage and drying facility loans.

Appendix table 8--Farm financial ratios: liquidity, solvency, profitability, and financial efficiency, 1987-92

Farm financial ratios	1987	1988	1989	1990	1991P	1992F
Ratio						
Liquidity ratios:						
Farm business debt service coverage 1/	3.23	3.44	3.48	3.61	3.5	3.4 to 3.6
Debt servicing 2/	.13	.12	.12	.11	.1	.1 to .2
Times interest earned ratio 3/	3.98	4.13	4.74	4.90	4.6	4.6 to 4.7
Percent						
Solvency ratios:						
Debt/asset 4/	18.7	17.4	16.6	16.4	16.5	16 to 17
Debt/equity 5/	23.0	21.1	19.8	19.6	19.7	19 to 20
Percent						
Profitability ratios:						
Return on equity 6/	3.5	3.4	4.5	4.2	2.8	3 to 4
Return on assets 7/	4.8	4.6	5.5	5.2	4.0	4 to 5
Net farm to gross cash farm income 8/	24.0	23.8	27.7	27.3	24.4	24 to 25
Percent						
Financial efficiency ratios:						
Gross ratio 9/	66.2	66.4	67.3	67.1	61.7	61 to 63
Interest to gross cash farm income 10/	8.8	8.2	7.9	7.5	7.4	7 to 8
Asset turnover 11/	22.1	22.0	22.1	22.3	21.7	21 to 22
Net cash farm income to debt ratio 12/	46.6	50.9	52.9	54.7	51.6	48 to 50
Ratio						
Financial leverage index 13/	.74	.74	.82	.81	.72	.7 to .8

P = preliminary; F = forecast. 1/ Assesses the ability of farm businesses to repay both principal and interest. 2/ Indicates the proportion of gross cash farm income needed to service debt. 3/ Shows the farm sector's ability to service debt out of net income. 4/ Shows the proportion of all assets that are financed with debt. 5/ Measures the relative proportion of funds provided by creditors (debt) and owners (equity). 6/ Measures the ability of farm sector management to realize an adequate return on the capital invested by the owner(s). 7/ Measures how efficiently managers use farm assets. 8/ The profit margin indicates profits earned per dollar of gross income. 9/ Gives the portion of gross cash farm income absorbed by production expenses (claims on farm businesses). 10/ Gives the proportion of gross cash farm income committed to interest payments. 11/ Measures the gross farm income generated per dollar of farm business assets. 12/ Indicates the burden placed on net cash farm income to retire outstanding debt. 13/ Indicates whether the use of financial leverage is beneficial.

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
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